Cheu 09/799,785

```
=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 15:56:08 ON 04 DEC 2003
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FILE COVERS 1907 - 4 Dec 2003  VOL 139 ISS 23
FILE LAST UPDATED: 3 Dec 2003  (20031203/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

=> d que l55
L43 (          2)SEA FILE=CAPLUS ABB=ON  PLU=ON  US2001-799785/AP
L44              SEL  PLU=ON  L43 1-2  RN :      28 TERMS
L45 (         28)SEA FILE=REGISTRY ABB=ON  PLU=ON  L44
L46 (         27)SEA FILE=REGISTRY ABB=ON  PLU=ON  L45 NOT C13H10O/MF
L47 (         26)SEA FILE=REGISTRY ABB=ON  PLU=ON  L46 NOT 16423-68-0/RN
L48 (         25)SEA FILE=REGISTRY ABB=ON  PLU=ON  L47 NOT ROSE BENGAL/CN
L49 (         24)SEA FILE=REGISTRY ABB=ON  PLU=ON  L48 NOT C43H48N2O6S2.NA/MF
L50 (         23)SEA FILE=REGISTRY ABB=ON  PLU=ON  L49 NOT 2321-07-5/RN
L51 (         22)SEA FILE=REGISTRY ABB=ON  PLU=ON  L50 NOT PHLOXINE B/CN
L52 (         27)SEA FILE=REGISTRY ABB=ON  PLU=ON  (108741-02-2/CRN OR 185318-74
                 -5/CRN OR 195136-60-8/CRN OR 198139-40-1/CRN OR 2320-38-9/CRN
                 OR 2320-96-9/CRN OR 31395-16-1/CRN OR 327029-69-6/CRN OR
                 327155-79-3/CRN OR 327155-80-6/CRN OR 327155-81-7/CRN OR
                 327155-82-8/CRN OR 327155-83-9/CRN OR 327155-84-0/CRN OR
                 327155-85-1/CRN OR 327155-86-2/CRN OR 33239-19-9/CRN OR
                 4372-02-5/CRN OR 596-03-2/CRN OR 6262-21-1/CRN OR 6359-05-3/CRN
                  OR 76-54-0/CRN)
L53 (         48)SEA FILE=REGISTRY ABB=ON  PLU=ON  L51 OR L52
L54 (        742)SEA FILE=HCAPLUS ABB=ON  PLU=ON  L53
L55           38 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L54 (L) (BAC OR DMA OR PAC OR
                 PKT OR THU)/RL

=> file medline

FILE 'MEDLINE' ENTERED AT 15:56:37 ON 04 DEC 2003

 FILE LAST UPDATED: 2 DEC 2003 (20031202/UP). FILE COVERS 1958 TO DATE.

 On April 13, 2003, MEDLINE was reloaded.  See HELP RLOAD for details.

 MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
```

RN: registry number
CRN: component registry number

search Registry for compounds listed

search for salts and/or mixtures

combine terms

search for cmpds in HCAPLUS

→ narrow # of cites by specifying therapeutic/pharmaceutical role

MeSH 2003 vocabulary. See http://www.nlm.nih.gov/mesh/changes2003.html for a description on changes.

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> d que l71
L56 (         2)SEA FILE=CAPLUS ABB=ON  PLU=ON  US2001-799785/AP
L57             SEL  PLU=ON  L56 1-2  RN :      28 TERMS
L58 (        28)SEA FILE=REGISTRY ABB=ON  PLU=ON  L57
L59 (        27)SEA FILE=REGISTRY ABB=ON  PLU=ON  L58 NOT C13H10O/MF
L60 (        26)SEA FILE=REGISTRY ABB=ON  PLU=ON  L59 NOT 16423-68-0/RN
L61 (        25)SEA FILE=REGISTRY ABB=ON  PLU=ON  L60 NOT ROSE BENGAL/CN
L62 (        24)SEA FILE=REGISTRY ABB=ON  PLU=ON  L61 NOT C43H48N2O6S2.NA/MF
L63 (        23)SEA FILE=REGISTRY ABB=ON  PLU=ON  L62 NOT 2321-07-5/RN
L64 (        22)SEA FILE=REGISTRY ABB=ON  PLU=ON  L63 NOT PHLOXINE B/CN
L65 (        27)SEA FILE=REGISTRY ABB=ON  PLU=ON  (108741-02-2/CRN OR 185318-74
               -5/CRN OR 195136-60-8/CRN OR 198139-40-1/CRN OR 2320-38-9/CRN
               OR 2320-96-9/CRN OR 31395-16-1/CRN OR 327029-69-6/CRN OR
               327155-79-3/CRN OR 327155-80-6/CRN OR 327155-81-7/CRN OR
               327155-82-8/CRN OR 327155-83-9/CRN OR 327155-84-0/CRN OR
               327155-85-1/CRN OR 327155-86-2/CRN OR 33239-19-9/CRN OR
               4372-02-5/CRN OR 596-03-2/CRN OR 6262-21-1/CRN OR 6359-05-3/CRN
                OR 76-54-0/CRN)
L66 (        48)SEA FILE=REGISTRY ABB=ON  PLU=ON  L64 OR L65
L67 (       164)SEA FILE=MEDLINE ABB=ON  PLU=ON  L66
L68 (      5570)SEA FILE=MEDLINE ABB=ON  PLU=ON  PHOTOCHEMOTHERAPY/CT
L69 (     46091)SEA FILE=MEDLINE ABB=ON  PLU=ON  LIGHT/CT
L70 (      2255)SEA FILE=MEDLINE ABB=ON  PLU=ON  ULTRAVIOLET THERAPY/CT
L71           3 SEA FILE=MEDLINE ABB=ON  PLU=ON  L67 AND (L68 OR L69 OR L70)
```

CT = controlled terms

search cmpds in Medline

Medline controlled terms for "photodynamic therapy" (from applicant's work)

```
=> file embase

FILE 'EMBASE' ENTERED AT 15:56:56 ON 04 DEC 2003
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 FILE COVERS 1974 TO 1 Dec 2003 (20031201/ED)

 EMBASE has been reloaded. Enter HELP RLOAD for details.

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=> d que l84
L72 (         2)SEA FILE=CAPLUS ABB=ON  PLU=ON  US2001-799785/AP
L73             SEL  PLU=ON  L72 1-2  RN :      28 TERMS
L74 (        28)SEA FILE=REGISTRY ABB=ON  PLU=ON  L73
L75 (        27)SEA FILE=REGISTRY ABB=ON  PLU=ON  L74 NOT C13H10O/MF
L76 (        26)SEA FILE=REGISTRY ABB=ON  PLU=ON  L75 NOT 16423-68-0/RN
L77 (        25)SEA FILE=REGISTRY ABB=ON  PLU=ON  L76 NOT ROSE BENGAL/CN
L78 (        24)SEA FILE=REGISTRY ABB=ON  PLU=ON  L77 NOT C43H48N2O6S2.NA/MF
L79 (        23)SEA FILE=REGISTRY ABB=ON  PLU=ON  L78 NOT 2321-07-5/RN
L80 (        22)SEA FILE=REGISTRY ABB=ON  PLU=ON  L79 NOT PHLOXINE B/CN
L81 (        27)SEA FILE=REGISTRY ABB=ON  PLU=ON  (108741-02-2/CRN OR 185318-74
               -5/CRN OR 195136-60-8/CRN OR 198139-40-1/CRN OR 2320-38-9/CRN
               OR 2320-96-9/CRN OR 31395-16-1/CRN OR 327029-69-6/CRN OR
               327155-79-3/CRN OR 327155-80-6/CRN OR 327155-81-7/CRN OR
               327155-82-8/CRN OR 327155-83-9/CRN OR 327155-84-0/CRN OR
```

```
                327155-85-1/CRN OR 327155-86-2/CRN OR 33239-19-9/CRN OR
                4372-02-5/CRN OR 596-03-2/CRN OR 6262-21-1/CRN OR 6359-05-3/CRN
                 OR 76-54-0/CRN)
L82 (         48)SEA FILE=REGISTRY ABB=ON  PLU=ON  L80 OR L81
L83 (         74)SEA FILE=EMBASE ABB=ON  PLU=ON  L82
L84            5 SEA FILE=EMBASE ABB=ON  PLU=ON  L83 AND PHOTODYNAMIC THERAPY
                +ALL/CT
```

search cmpds in Embase

controlled term from applicant's work

```
=> fil biosis

FILE 'BIOSIS' ENTERED AT 15:57:07 ON 04 DEC 2003
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FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 3 December 2003 (20031203/ED)

FILE RELOADED: 19 October 2003.

=> d que l42
L1   (          2)SEA FILE=CAPLUS ABB=ON  PLU=ON  US2001-799785/AP
L2                SEL  PLU=ON  L1 1-2  RN :       28 TERMS
L3   (         28)SEA FILE=REGISTRY ABB=ON  PLU=ON  L2
L4   (         27)SEA FILE=REGISTRY ABB=ON  PLU=ON  L3 NOT C13H10O/MF
L5   (         26)SEA FILE=REGISTRY ABB=ON  PLU=ON  L4 NOT 16423-68-0/RN
L6   (         25)SEA FILE=REGISTRY ABB=ON  PLU=ON  L5 NOT ROSE BENGAL/CN
L7   (         24)SEA FILE=REGISTRY ABB=ON  PLU=ON  L6 NOT C43H48N2O6S2.NA/MF
L8   (         23)SEA FILE=REGISTRY ABB=ON  PLU=ON  L7 NOT 2321-07-5/RN
L9   (         22)SEA FILE=REGISTRY ABB=ON  PLU=ON  L8 NOT PHLOXINE B/CN
L10  (         27)SEA FILE=REGISTRY ABB=ON  PLU=ON  (108741-02-2/CRN OR 185318-74
                -5/CRN OR 195136-60-8/CRN OR 198139-40-1/CRN OR 2320-38-9/CRN
                OR 2320-96-9/CRN OR 31395-16-1/CRN OR 327029-69-6/CRN OR
                327155-79-3/CRN OR 327155-80-6/CRN OR 327155-81-7/CRN OR
                327155-82-8/CRN OR 327155-83-9/CRN OR 327155-84-0/CRN OR
                327155-85-1/CRN OR 327155-86-2/CRN OR 33239-19-9/CRN OR
                4372-02-5/CRN OR 596-03-2/CRN OR 6262-21-1/CRN OR 6359-05-3/CRN
                 OR 76-54-0/CRN)
L11  (         48)SEA FILE=REGISTRY ABB=ON  PLU=ON  L9 OR L10
L12  (        205)SEA FILE=BIOSIS ABB=ON  PLU=ON  L11
L13             3 SEA FILE=BIOSIS ABB=ON  PLU=ON  L12 AND PHOTODYNAMIC THERAPY
L29  (          2)SEA FILE=CAPLUS ABB=ON  PLU=ON  US2001-799785/AP
L30               SEL  PLU=ON  L29 1-2  RN :       28 TERMS.
L31  (         28)SEA FILE=REGISTRY ABB=ON  PLU=ON  L30
L32  (         27)SEA FILE=REGISTRY ABB=ON  PLU=ON  L31 NOT C13H10O/MF
L33  (         26)SEA FILE=REGISTRY ABB=ON  PLU=ON  L32 NOT 16423-68-0/RN
L34  (         25)SEA FILE=REGISTRY ABB=ON  PLU=ON  L33 NOT ROSE BENGAL/CN
L35  (         24)SEA FILE=REGISTRY ABB=ON  PLU=ON  L34 NOT C43H48N2O6S2.NA/MF
L36  (         23)SEA FILE=REGISTRY ABB=ON  PLU=ON  L35 NOT 2321-07-5/RN
L37  (         22)SEA FILE=REGISTRY ABB=ON  PLU=ON  L36 NOT PHLOXINE B/CN
L38  (         27)SEA FILE=REGISTRY ABB=ON  PLU=ON  (108741-02-2/CRN OR 185318-74
                -5/CRN OR 195136-60-8/CRN OR 198139-40-1/CRN OR 2320-38-9/CRN
                OR 2320-96-9/CRN OR 31395-16-1/CRN OR 327029-69-6/CRN OR
                327155-79-3/CRN OR 327155-80-6/CRN OR 327155-81-7/CRN OR
                327155-82-8/CRN OR 327155-83-9/CRN OR 327155-84-0/CRN OR
                327155-85-1/CRN OR 327155-86-2/CRN OR 33239-19-9/CRN OR
                4372-02-5/CRN OR 596-03-2/CRN OR 6262-21-1/CRN OR 6359-05-3/CRN
                 OR 76-54-0/CRN)
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search cmpds in Biosis

controlled term

```
L39 (        48)SEA FILE=REGISTRY ABB=ON  PLU=ON  L37 OR L38
L40 (       205)SEA FILE=BIOSIS ABB=ON  PLU=ON  L39
L41          16 SEA FILE=BIOSIS ABB=ON  PLU=ON  L40 AND (LIGHT OR ULTRAVIOLET
                THERAPY)
L42          18 SEA FILE=BIOSIS ABB=ON  PLU=ON  L13 OR L41
```

search cmpds in Biosis (repeat)

more controlled terms

combine cites

```
=> fil stnguide


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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Nov 28, 2003 (20031128/UP).

=> dup rem l55 l71 l84 l42
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remove duplicate cites

```
FILE 'HCAPLUS' ENTERED AT 15:58:02 ON 04 DEC 2003
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PROCESSING COMPLETED FOR L55
PROCESSING COMPLETED FOR L71
PROCESSING COMPLETED FOR L84
PROCESSING COMPLETED FOR L42
L85          63 DUP REM L55 L71 L84 L42 (1 DUPLICATE REMOVED)
                ANSWERS '1-38' FROM FILE HCAPLUS
                ANSWERS '39-41' FROM FILE MEDLINE
                ANSWERS '42-46' FROM FILE EMBASE
                ANSWERS '47-63' FROM FILE BIOSIS

=> d ibib hitstr abs 1-38

L85  ANSWER 1 OF 63  HCAPLUS  COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER:         2003:855773  HCAPLUS
DOCUMENT NUMBER:          139:341818
TITLE:                    Orthodontic adhesives containing polymerizable
                          components and fluoride-releasing materials
INVENTOR(S):              Brennan, Joan V.; Mitra, Sumitra B.; Schaberg, Mark
                          S.; Kuehn, Robert D.; Oxman, Joel D.; James, Darrell
                          S.; Rozzi, Sharon M.; Cinader, David K.
PATENT ASSIGNEE(S):       3M Innovative Properties Company, USA
SOURCE:                   PCT Int. Appl., 61 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:
```

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2003088928 | A1 | 20031030 | WO 2003-US3774 | 20030207 |

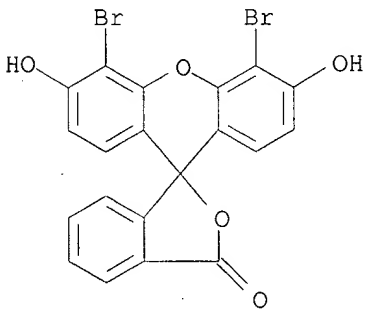
W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-126505 A 20020418

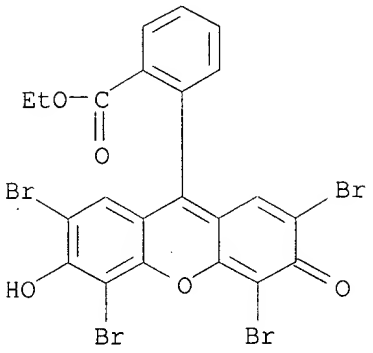
IT **4372-02-5**, 4',5'-Dibromofluorescein **6359-05-3**, Ethyl Eosin
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(orthodontic adhesives containing polymerizable components and fluoride-releasing materials)

RN 4372-02-5 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dibromo-3',6'-dihydroxy-, disodium salt (9CI) (CA INDEX NAME)




●2 Na

RN 6359-05-3 HCAPLUS
CN Benzoic acid, 2-(2,4,5,7-tetrabromo-6-hydroxy-3-oxo-3H-xanthen-9-yl)-, ethyl ester, potassium salt (9CI) (CA INDEX NAME)



● K

AB Orthodontic adhesives and packaged articles including an orthodontic appliance having a base for bonding the appliance to a tooth are disclosed. In the packaged articles, an adhesive is on the base of the appliance, and a container at least partially surrounds the orthodontic appliance having adhesive on the base thereof. Thus, a composition contained PEG dimethacrylate and a methacrylic urethane 6.59, PEG dimethacrylate 6.59, bis-GMA 7.31, BHT 0.021, camphorquinone 0.065, diphenyliodonium hexafluorophosphate 0.158, and Et 4-(N,N-dimethylamino)benzoate 0.263%, silane-treated quartz filler 38.88, silane-treated fluoroaluminosiilicate filler 38.88, and pyrogenic silica 1.25%.

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L85 ANSWER 2 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2003:154160 HCAPLUS
DOCUMENT NUMBER: 138:210297
TITLE: Pharmaceutical formulations containing dye
INVENTOR(S): Gruber, Thomas
PATENT ASSIGNEE(S): USA
SOURCE: PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2003015531 | A2 | 20030227 | WO 2002-US24549 | 20020801 |
| WO 2003015531 | A3 | 20031106 | | |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

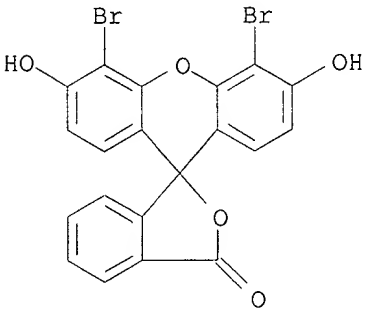
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2001-310513P P 20010806

IT **596-03-2**, D&COrangeNo.5
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(pharmaceutical formulations containing dye)

RN 596-03-2 HCAPLUS

CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dibromo-3',6'-dihydroxy- (9CI) (CA INDEX NAME)




AB Methods and compns. for preventing abuse of dosage forms comprising an opioid analgesic and an aversive agent (e.g., a dye) in an effective amount to deter an abuser from administering a tampered form of the dosage form i.v., intranasally, and/or orally are revealed. Formulation of a tablet containing 20 mg oxycodone hydrochloride and 1.2 mg FD & C Blue Number 2 is disclosed.

L85 ANSWER 3 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2003:454815 HCAPLUS
DOCUMENT NUMBER: 139:26707
TITLE: Compositions and methods to inhibit tartar and microbes using denture adhesive compositions with colorants
INVENTOR(S): Rajaiah, Jayanth; Gilday-Weber, Kimberly Ann; Ernst, Lisa Catron; Owens, Timothy Sadley; Barnes, John E.; Ramji, Nivedita
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 13 pp., Cont.-in-part of U.S. Ser. No. 716,766.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 2003108488 | A1 | 20030612 | US 2002-218632 | 20020814 |
| US 6475497 | B1 | 20021105 | US 2000-716766 | 20001120 |
| US 6475498 | B1 | 20021105 | US 2000-716820 | 20001120 |

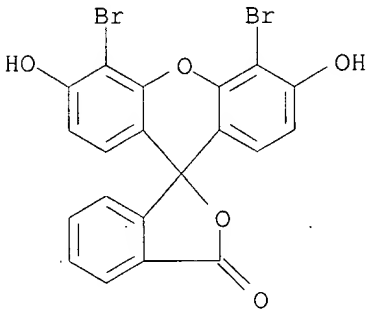
PRIORITY APPLN. INFO.:
US 1999-169558P P 19991208
US 1999-169702P P 19991208
US 1999-169703P P 19991208
US 2000-716766 A2 20001120
US 2000-716810 A2 20001120
US 2000-716820 A2 20001120

IT **596-03-2 33239-19-9**
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)

(denture adhesive compns. with colorants for prevention, reduction, and inhibition of tartar, plaque, and oral microbes)

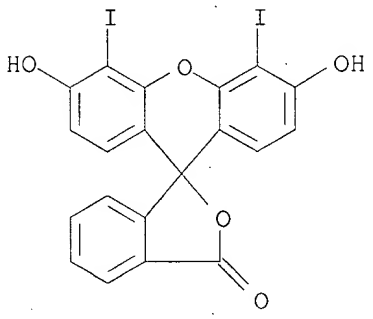
RN 596-03-2 HCAPLUS

CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dibromo-3',6'-dihydroxy- (9CI) (CA INDEX NAME)




RN 33239-19-9 HCAPLUS

CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 3',6'-dihydroxy-4',5'-diiodo-, disodium salt (9CI) (CA INDEX NAME)




●2 Na

AB The present invention relates to compns. comprising: (a) about 15-70% by weight of the composition of a denture adhesive component; (b) about 0.006-10% by weight of a colorant selected from the group consisting of xanthene dyes, fluorescein dyes, free acids and salts thereof, and mixts. thereof; and (c) a safe and effective amount of a non-aqueous denture adhesive carrier. The present invention further relates to a method of reducing, inhibiting and/or preventing, calculus, tartar, plaque, stain, and/or microbes in the oral cavity, by applying the above denture adhesive composition to the oral cavity of a denture wearer in need thereof. The present invention further relates to a method of providing improved antimicrobial effects in the oral cavity by applying the above denture adhesive composition to the oral cavity of a denture wearer in need thereof. For example, a composition contained white mineral oil 23.95 g, white petrolatum 21.909 g, CM-cellulose sodium 20.00 g, colloidal silica 1.14 g, D&G Red 27 0.00001 g, and a salt, acid or anhydride of alkyl vinyl ether-maleic acid copolymer (AVE/MA) and/or AVE/MA/isobutylene (IB) 33.00 g.

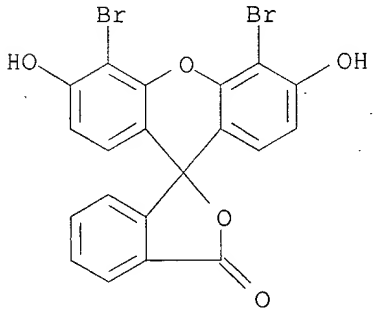
L85 ANSWER 4 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:293392 HCAPLUS
DOCUMENT NUMBER: 136:330628
TITLE: Adhesive for use in the oral environment having color-changing capabilities
INVENTOR(S): Nikutowski, Enrique A.; James, Darrell S.; Oxman, Joel D.
PATENT ASSIGNEE(S): 3M Innovative Properties Company, USA
SOURCE: PCT Int. Appl., 26 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2002030363 | A2 | 20020418 | WO 2001-US31118 | 20011004 |
| WO 2002030363 | A3 | 20020926 | | |
| W: CA, JP | | | | |
| RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR | | | | |
| US 6528555 | B1 | 20030304 | US 2000-689019 | 20001012 |
| EP 1326573 | A2 | 20030716 | EP 2001-979467 | 20011004 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR | | | | |

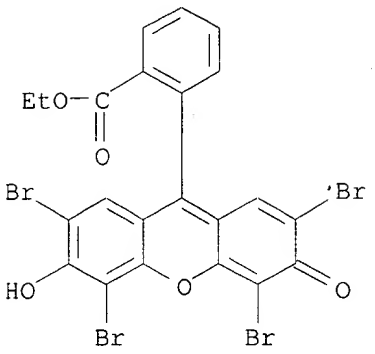
PRIORITY APPLN. INFO.: US 2000-689019 A 20001012
WO 2001-US31118 W 20011004

IT **596-03-2**, 4',5'-Dibromofluorescein **6359-05-3**, Ethyl eosin
RL: MOA (Modifier or additive use); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(adhesive for use in the oral environment having color-changing capabilities)

RN 596-03-2 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dibromo-3',6'-dihydroxy- (9CI) (CA INDEX NAME)




RN 6359-05-3 HCAPLUS
CN Benzoic acid, 2-(2,4,5,7-tetrabromo-6-hydroxy-3-oxo-3H-xanthen-9-yl)-, ethyl ester, potassium salt (9CI) (CA INDEX NAME)



● K

AB An adhesive suitable for use in the oral environment is provided. The adhesive comprises a filler, hardenable resin, a hardener, and a colorant, the composition has an initial color prior to exposure to actinic radiation and a final color that is different from the initial color subsequent to the composition being exposed to actinic radiation. The adhesive can be precoated on to orthodontic appliances. Compns. contained Bis-GMA, Bis-EMA, diphenyliodium hexafluorophosphate, BHT, camphorquinone, Et, 4-dimethylaminobenzoate, and Erythrosin Yellow blend.

L85 ANSWER 5 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:71870 HCAPLUS
DOCUMENT NUMBER: 136:123670
TITLE: Halogenated xanthene derivatives for chemotherapeutic treatment
INVENTOR(S): Dees, H. Craig; Scott, Timothy
PATENT ASSIGNEE(S): Photogen, Inc., USA
SOURCE: PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2002005812 | A1 | 20020124 | WO 2001-US21585 | 20010710 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| CA 2252782 | AA | 19980507 | CA 1997-2252782 | 19971027 |
| EP 1032321 | A1 | 20000906 | EP 1997-948121 | 19971027 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| JP 2001503748 | T2 | 20010321 | JP 1998-520604 | 19971027 |

| | | | | |
|---|---|---|---|---|
| IL 128356 | A1 | 20011125 | IL 1997-128356 | 19971027 |
| CA 2252783 | AA | 19980507 | CA 1997-2252783 | 19971028 |
| EP 977592 | A1 | 20000209 | EP 1997-946336 | 19971028 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| JP 2000511929 | T2 | 20000912 | JP 1998-520696 | 19971028 |
| US 5998597 | A | 19991207 | US 1997-989231 | 19971211 |
| JP 2002517419 | T2 | 20020618 | JP 2000-552976 | 19990528 |
| JP 2002528472 | T2 | 20020903 | JP 2000-579116 | 19991026 |
| US 2002033989 | A1 | 20020321 | US 2001-779808 | 20010208 |
| US 6525862 | B2 | 20030225 | | |
| JP 2003526091 | T2 | 20030902 | JP 2001-564686 | 20010307 |
| TW 515707 | B | 20030101 | TW 2001-90105458 | 20010329 |
| US 2002161035 | A1 | 20021031 | US 2001-900355 | 20010706 |
| EP 1311261 | A1 | 20030521 | EP 2001-954627 | 20010710 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| US 2002122236 | A1 | 20020905 | US 2002-45562 | 20020110 |
| US 6519076 | B2 | 20030211 | | |

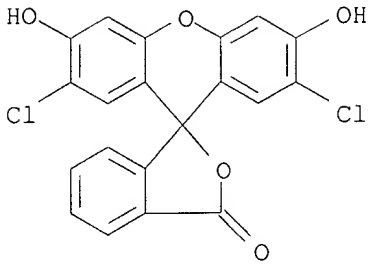
PRIORITY APPLN. INFO.:

| | | |
|---|---|---|
| US 2000-218464P | P | 20000714 |
| US 2001-900355 | A | 20010706 |
| US 1996-739801 | A | 19961030 |
| US 1996-741370 | A | 19961030 |
| WO 1997-US19249 | W | 19971027 |
| WO 1997-US19527 | W | 19971028 |
| US 1998-72962 | A3 | 19980505 |
| US 1998-96832 | A | 19980612 |
| US 1998-130041 | A2 | 19980806 |
| US 1998-184388 | A | 19981102 |
| WO 1999-US12056 | W | 19990528 |
| US 1999-149015P | P | 19990813 |
| WO 1999-US25074 | W | 19991026 |
| US 2000-187958P | P | 20000309 |
| US 2000-191803P | P | 20000324 |
| US 2000-635276 | A2 | 20000809 |
| US 2001-779808 | A | 20010208 |
| US 2001-799785 | A2 | 20010306 |
| WO 2001-US7231 | W | 20010307 |
| WO 2001-US21585 | W | 20010710 |

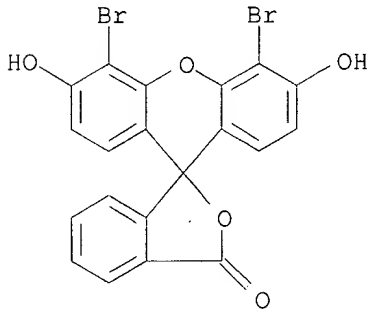
IT **76-54-0**, 2',7'-Dichlorofluorescein **596-03-2**, Solvent red 72 **2320-38-9**, 2',4',5',7'-Tetrachlorofluorescein **2320-96-9**, 4',5'-Dichlorofluorescein **4372-02-5**, Dibromofluorescein **6262-21-1**, 4,5,6,7-Tetrachlorofluorescein **6359-05-3**, Ethyl eosin **31395-16-1**, Diiodofluorescein **108741-02-2**, Trichloroerythrosin **185318-74-5**, 4,5,6,7-Tetrafluorofluorescein **195136-60-8**, 2',4,5,6,7,7'-Hexafluorofluorescein **198139-40-1**, 2',7'-Dichloro-4,5,6,7-tetrafluorofluorescein **327029-69-6** **327155-79-3** **327155-80-6** **327155-81-7** **327155-82-8** **327155-83-9**, Dichloroerythrosine **327155-84-0**, Monofluoroerythrosine **327155-85-1**, Difluoroerythrosine **327155-86-2**, Trifluoroerythrosine
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(halogenated xanthene derivs. for chemotherapeutic treatment)

RN 76-54-0 HCAPLUS

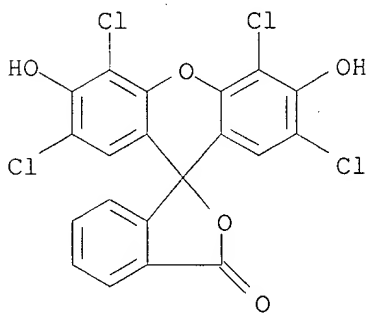
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 2',7'-dichloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



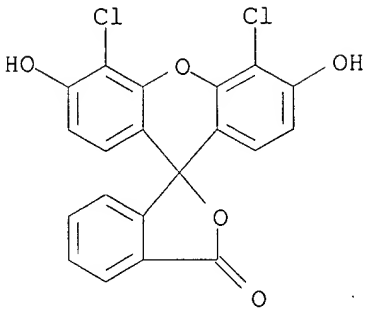
RN 596-03-2 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dibromo-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



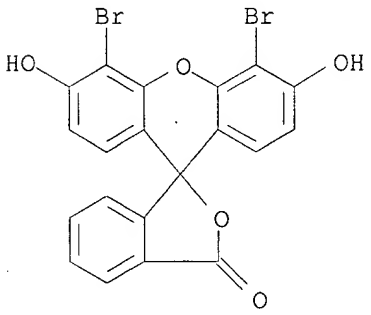
RN 2320-38-9 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 2',4',5',7'-tetrachloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



RN 2320-96-9 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dichloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)

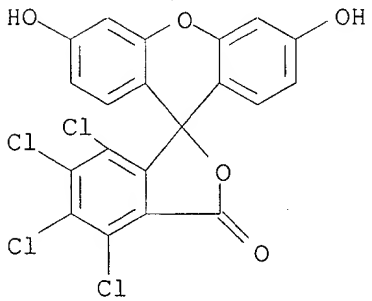


RN 4372-02-5 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dibromo-3',6'-dihydroxy-, disodium salt (9CI) (CA INDEX NAME)

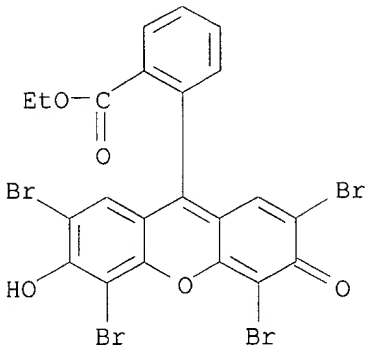


●2 Na

RN 6262-21-1 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4,5,6,7-tetrachloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)

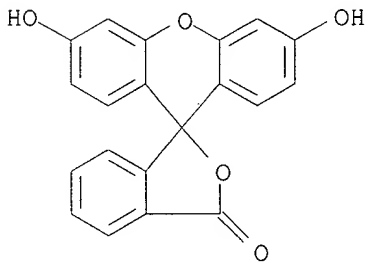


RN 6359-05-3 HCAPLUS
CN Benzoic acid, 2-(2,4,5,7-tetrabromo-6-hydroxy-3-oxo-3H-xanthen-9-yl)-, ethyl ester, potassium salt (9CI) (CA INDEX NAME)



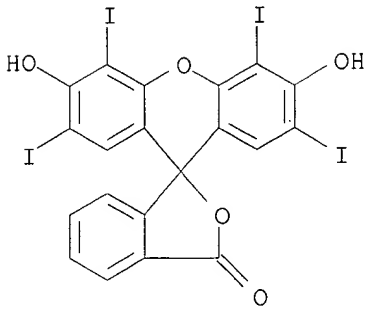
● K

RN 31395-16-1 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 3',6'-dihydroxydiiodo- (9CI) (CA INDEX NAME)



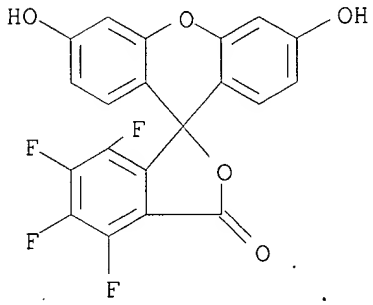
2 ( D1—I )

RN 108741-02-2 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar,ar,ar-trichloro-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)

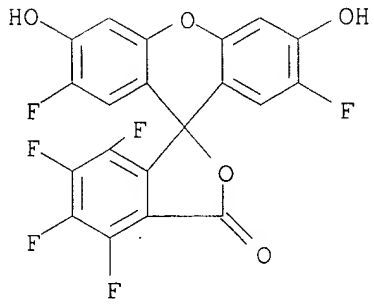


3 ( D1—Cl )

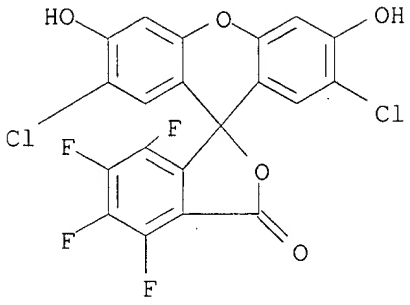
RN 185318-74-5 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4,5,6,7-tetrafluoro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



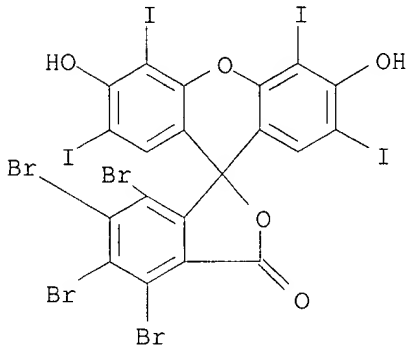
RN 195136-60-8 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 2',4,5,6,7,7'-hexafluoro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



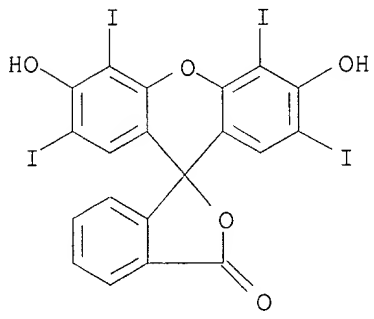
RN 198139-40-1 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 2',7'-dichloro-4,5,6,7-tetrafluoro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



RN 327029-69-6 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4,5,6,7-tetrabromo-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)

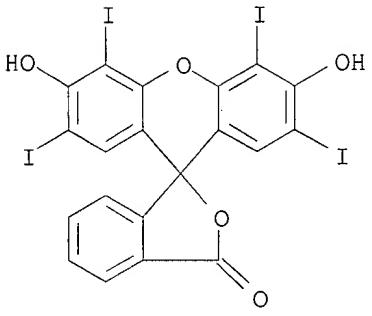


RN 327155-79-3 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar-bromo-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



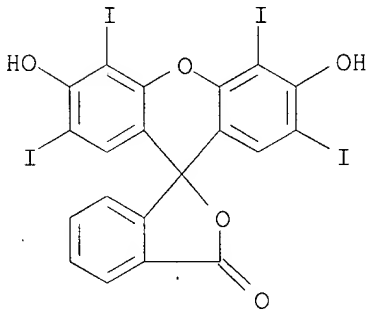
D1—Br

RN 327155-80-6 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar,ar-dibromo-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



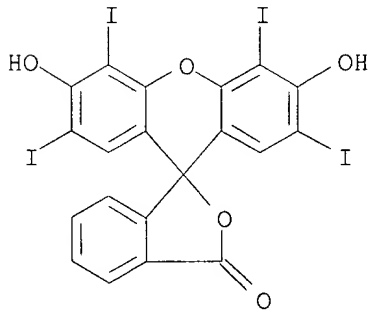
2 ( D1—Br )

RN 327155-81-7 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar,ar,ar-tribromo-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



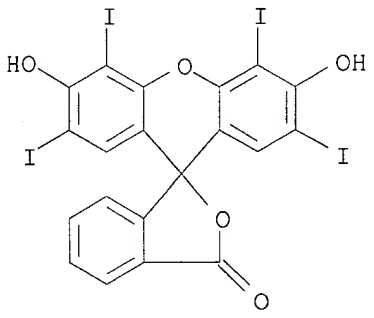
3 ( D1—Br )

RN 327155-82-8 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar-chloro-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



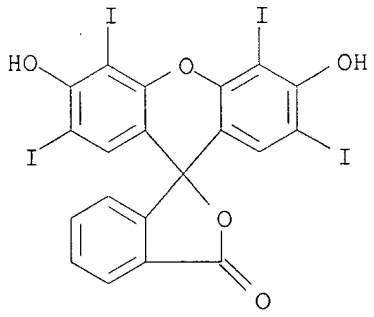
D1—Cl

RN 327155-83-9 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar,ar-dichloro-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



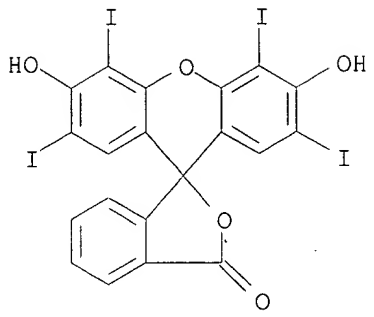
2 ( D1—Cl )

RN 327155-84-0 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar-fluoro-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



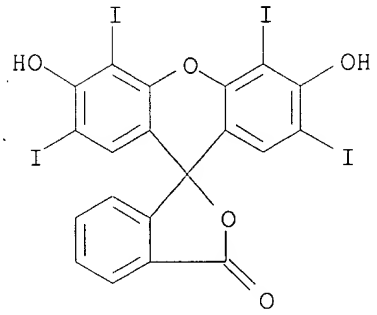
D1—F

RN 327155-85-1 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar,ar-difluoro-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



2 ( D1—F )

RN 327155-86-2 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar,ar,ar-trifluoro-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



3 ( D1—F )

AB New chemotherapeutic medicaments and certain medical uses and methods for use of such chemotherapeutic medicaments for treatment of disease in human or animal tissue are described, wherein a primary active component of such medicaments is a halogenated xanthene or halogenated xanthene derivative Example derivs. are fluorescein derivs., Solvent Red 72, Eosins, and Phloxine B.
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L85 ANSWER 6 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:71853 HCAPLUS
DOCUMENT NUMBER: 136:112654
TITLE: Inhibition of the cystic fibrosis transmembrane conductance regulator chloride channel
INVENTOR(S): Sheppard, David Noel; Cai, Zhiwei
PATENT ASSIGNEE(S): University of Bristol, UK
SOURCE: PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2002005794 | A2 | 20020124 | WO 2001-GB3154 | 20010712 |
| WO 2002005794 | A3 | 20020801 | | |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

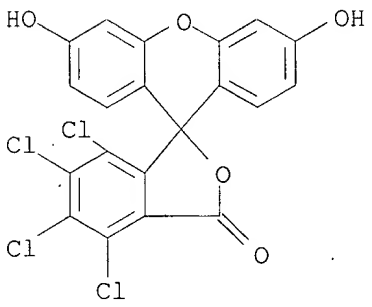
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

| | | | | |
|---|---|---|---|---|
| EP 1299092 | A2 | 20030409 | EP 2001-949691 | 20010712 |

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRIORITY APPLN. INFO.: GB 2000-17084 A 20000713
WO 2001-GB3154 W 20010712

IT **6262-21-1**, Tetrachlorofluorescein
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(inhibition of the cystic fibrosis transmembrane conductance regulator chloride channel and treatment of polycystic kidney disease)
RN 6262-21-1 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4,5,6,7-tetrachloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)




AB Fluorescein and derivs. have use in the treatment of a disease of a living animal body, including human, which disease is responsive to the inhibition of the cystic fibrosis transmembrane conductance regulator chloride channels, for instance polycystic kidney disease and secretory diarrhea.

L85 ANSWER 7 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:71852 HCAPLUS
DOCUMENT NUMBER: 136:112661
TITLE: Activation of the cystic fibrosis transmembrane conductance regulator chloride channel
INVENTOR(S): Sheppard, David Noel; Gai, Zhiwei
PATENT ASSIGNEE(S): University of Bristol, UK
SOURCE: PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2002005793 | A2 | 20020124 | WO 2001-GB3151 | 20010712 |
| WO 2002005793 | A3 | 20020906 | | |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

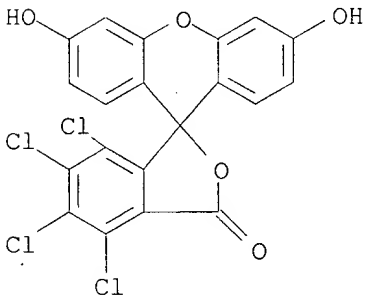
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

| | | | | |
|---|---|---|---|---|
| EP 1299098 | A2 | 20030409 | EP 2001-949688 | 20010712 |

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRIORITY APPLN. INFO.: GB 2000-17083 A 20000713
WO 2001-GB3151 W 20010712

IT **6262-21-1**, Tetrachlorofluorescein
RL: **PAC (Pharmacological activity); THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(activation of cystic fibrosis transmembrane conductance regulator chloride channel)
RN 6262-21-1 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4,5,6,7-tetrachloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)




AB Fluorescein and derivs. have use in the treatment of a disease of condition of a living animal body, including human, which disease is responsive to the activation of the cystic fibrosis transmembrane conductance regulator chloride channels, for instance cystic fibrosis, disseminated bronchectasis, pulmonary infections, chronic pancreatitis, male infertility and long QT syndrome.

L85 ANSWER 8 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:964924 HCAPLUS
DOCUMENT NUMBER: 138:44708
TITLE: Polymer gel for cancer treatment
INVENTOR(S): Zheng, Ji; Chu, Feng
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 13 pp.
CODEN: USXXCO

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

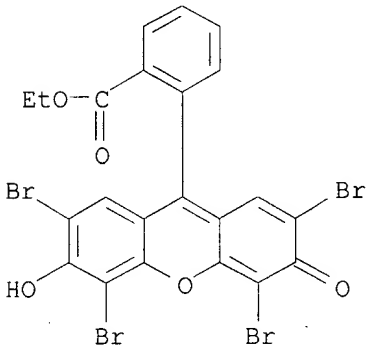
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 2002192289 | A1 | 20021219 | US 2002-173354 | 20020615 |

PRIORITY APPLN. INFO.: US 2001-298943P P 20010618

IT **6359-05-3**, Ethyl eosin
RL: CAT (Catalyst use); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(photoinitiator; polymer gel for cancer treatment)

RN 6359-05-3 HCAPLUS

CN Benzoic acid, 2-(2,4,5,7-tetrabromo-6-hydroxy-3-oxo-3H-xanthen-9-yl)-, ethyl ester, potassium salt (9CI) (CA INDEX NAME)




● K

AB A method is disclosed for cancer treatment based on using a solid polymer gel to completely block blood vessels of tumor. A polymer aqueous solution is injected into blood vessels and formed a solid gel in blood vessels of tumor by applying electromagnetic radiation or temperature source at tumor tissue to inducing crosslinking or phase transition. The tumor cells starve and perish because of without nutrients and oxygen provided by vascularization and metastasis can also be prevented because polymer gels blocks tumor cells to shed into blood circulation, when the blood vessels of tumor are completely blocked by the solid polymer gels. Also, anti-cancer drug including chemotherapy drug, radiation drug or anti-angiogenic drug can be mixed or conjugated with the polymer in polymer aqueous solution to be locally delivered to the tumor after polymer gel formation in the blood vessels of tumor of human or animal. An example photopolymerizable polymer is branched PEG-cinnamylideneacetyl chloride.

L85 ANSWER 9 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:833518 HCAPLUS
DOCUMENT NUMBER: 137:342122
TITLE: Medicaments containing a halogenated xanthene for chemotherapeutic treatment of disease
INVENTOR(S): Dees, H. Craig; Scott, Timothy C.
PATENT ASSIGNEE(S): Photogen, Inc., USA
SOURCE: U.S. Pat. Appl. Publ., 15 pp., Cont.-in-part of U. S.

Ser. 799,785.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 2002161035 | A1 | 20021031 | US 2001-900355 | 20010706 |
| CA 2252782 | AA | 19980507 | CA 1997-2252782 | 19971027 |
| EP 1032321 | A1 | 20000906 | EP 1997-948121 | 19971027 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| JP 2001503748 | T2 | 20010321 | JP 1998-520604 | 19971027 |
| IL 128356 | A1 | 20011125 | IL 1997-128356 | 19971027 |
| CA 2252783 | AA | 19980507 | CA 1997-2252783 | 19971028 |
| EP 977592 | A1 | 20000209 | EP 1997-946336 | 19971028 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| JP 2000511929 | T2 | 20000912 | JP 1998-520696 | 19971028 |
| US 5998597 | A | 19991207 | US 1997-989231 | 19971211 |
| JP 2002517419 | T2 | 20020618 | JP 2000-552976 | 19990528 |
| JP 2002522111 | T2 | 20020723 | JP 2000-563202 | 19990802 |
| JP 2002528472 | T2 | 20020903 | JP 2000-579116 | 19991026 |
| US 2002033989 | A1 | 20020321 | US 2001-779808 | 20010208 |
| US 6525862 | B2 | 20030225 | | |
| US 2001022970 | A1 | 20010920 | US 2001-799785 | 20010306 |
| JP 2003526091 | T2 | 20030902 | JP 2001-564686 | 20010307 |
| TW 515707 | B | 20030101 | TW 2001-90105458 | 20010329 |
| WO 2002005812 | A1 | 20020124 | WO 2001-US21585 | 20010710 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| EP 1311261 | A1 | 20030521 | EP 2001-954627 | 20010710 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| US 2002122236 | A1 | 20020905 | US 2002-45562 | 20020110 |
| US 6519076 | B2 | 20030211 | | |
| US 2003133940 | A1 | 20030717 | US 2002-331735 | 20021230 |

PRIORITY APPLN. INFO.:

| | | |
|---|---|---|
| US 1998-130041 | A2 | 19980806 |
| US 1999-149015P | P | 19990813 |
| US 2000-191803P | P | 20000324 |
| US 2000-218464P | P | 20000714 |
| US 2000-635276 | A2 | 20000809 |
| US 2001-799785 | A2 | 20010306 |
| US 1996-739801 | A | 19961030 |
| US 1996-741370 | A | 19961030 |
| WO 1997-US19249 | W | 19971027 |
| WO 1997-US19527 | W | 19971028 |
| US 1998-72407 | A2 | 19980504 |
| US 1998-72962 | A3 | 19980505 |
| US 1998-96832 | A | 19980612 |
| US 1998-184388 | A | 19981102 |

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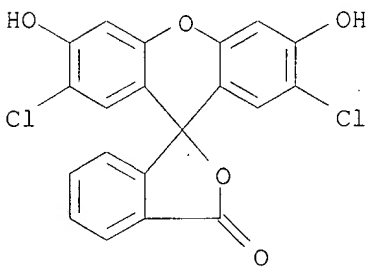
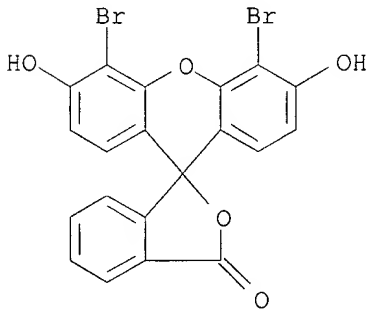
|---|---|---|
| US 1998-216787 | A3 | 19981221 |
| WO 1999-US12056 | W | 19990528 |
| WO 1999-US17515 | W | 19990802 |
| WO 1999-US25074 | W | 19991026 |
| US 2000-187958P | P | 20000309 |
| US 2001-779808 | A | 20010208 |
| WO 2001-US7231 | W | 20010307 |
| US 2001-900355 | A | 20010706 |
| WO 2001-US21585 | W | 20010710 |

IT **76-54-0**, 2',7'-Dichlorofluorescein **596-03-2**, Solvent Red 72 **2320-38-9**, 2',4',5',7'-Tetrachlorofluorescein **2320-96-9**, 4',5'-Dichlorofluorescein **4372-02-5**, Dibromofluorescein **6359-05-3**, Ethyl Eosin **33239-19-9**, Diiodofluorescein **108741-02-2**, Trichloroerythrosin **185318-74-5**, 4,5,6,7-Tetrafluorofluorescein **195136-60-8**, 2',4,5,6,7,7'-Hexafluorofluorescein **198139-40-1**, 2',7'-Dichloro-4,5,6,7-Tetrafluorofluorescein **327029-69-6** **327155-79-3** **327155-80-6** **327155-81-7** **327155-82-8** **327155-83-9** **327155-84-0** **327155-85-1** **327155-86-2**
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(compns. containing halogenated xanthene for chemotherapeutic treatment of disease)

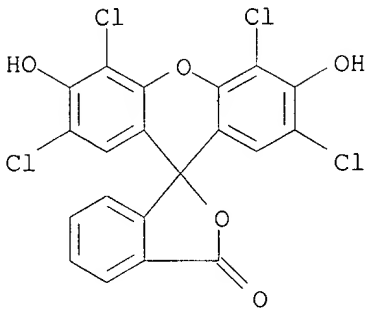
RN 76-54-0 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 2',7'-dichloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



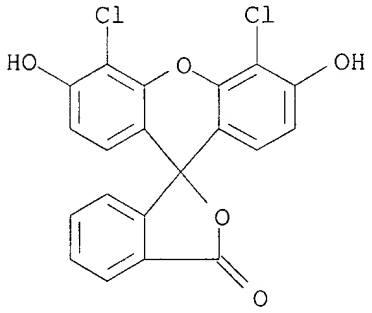

RN 596-03-2 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dibromo-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



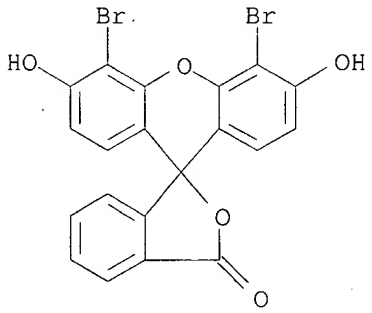

RN 2320-38-9 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 2',4',5',7'-tetrachloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



RN 2320-96-9 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dichloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)

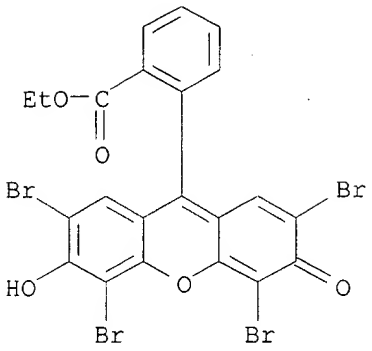


RN 4372-02-5 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dibromo-3',6'-dihydroxy-, disodium salt (9CI) (CA INDEX NAME)



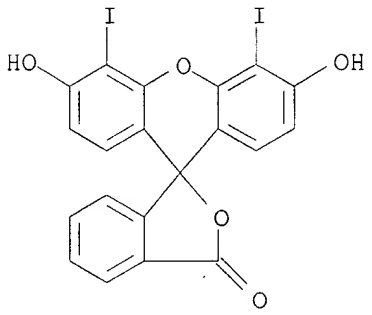
●2 Na

RN 6359-05-3 HCAPLUS
CN Benzoic acid, 2-(2,4,5,7-tetrabromo-6-hydroxy-3-oxo-3H-xanthen-9-yl)-, ethyl ester, potassium salt (9CI) (CA INDEX NAME)



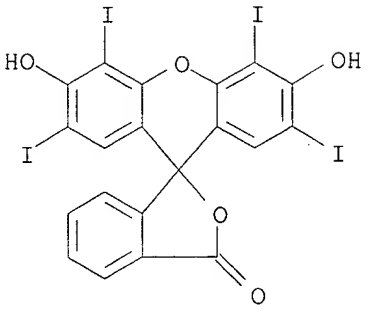
● K

RN 33239-19-9 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 3',6'-dihydroxy-4',5'-diiodo-, disodium salt (9CI) (CA INDEX NAME)



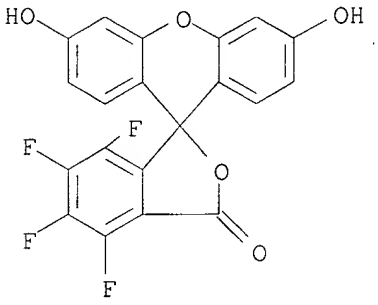
●2 Na

RN 108741-02-2 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar,ar,ar-trichloro-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)

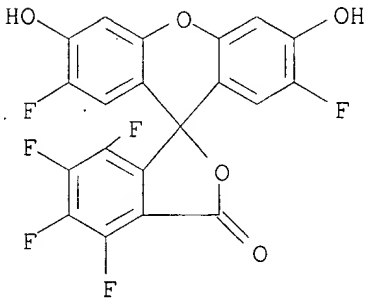


3 ( D1—Cl )

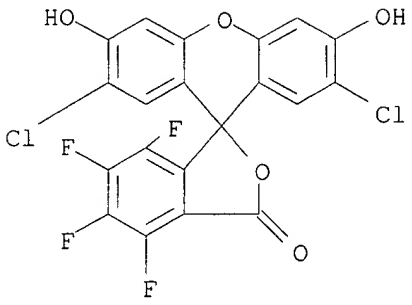
RN 185318-74-5 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4,5,6,7-tetrafluoro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



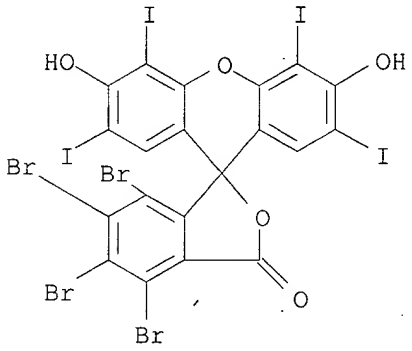
RN 195136-60-8 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 2',4,5,6,7,7'-hexafluoro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



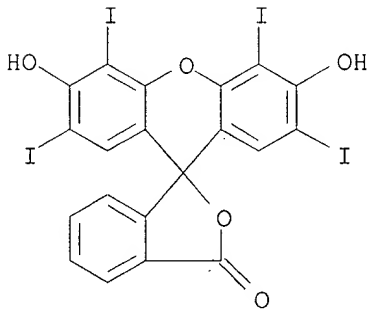
RN 198139-40-1 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 2',7'-dichloro-4,5,6,7-tetrafluoro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



RN 327029-69-6 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4,5,6,7-tetrabromo-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)

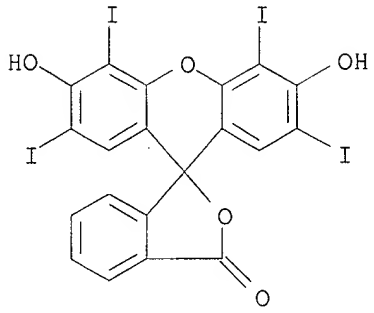


RN 327155-79-3 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar-bromo-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



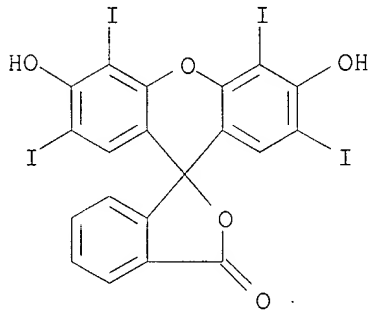
D1—Br

RN 327155-80-6 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar,ar-dibromo-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



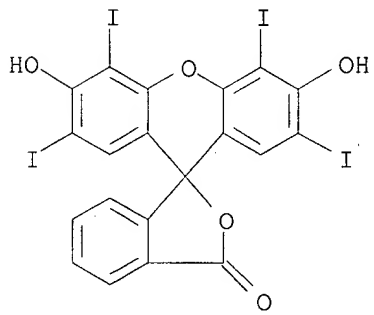
2 ( D1—Br )

RN 327155-81-7 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar,ar,ar-tribromo-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



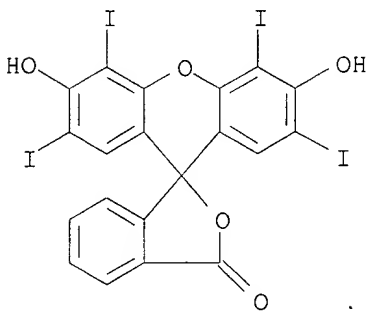
3 ( D1—Br )

RN 327155-82-8 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar-chloro-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



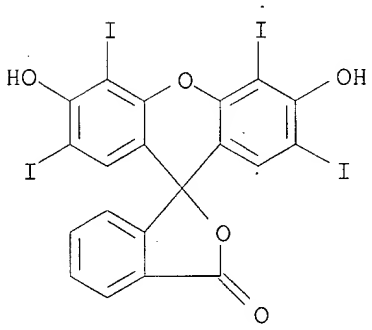
D1—Cl

RN 327155-83-9 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar,ar-dichloro-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



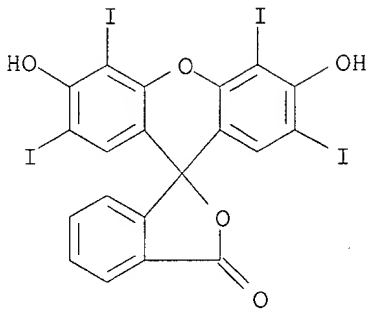
2 ( D1—Cl )

RN 327155-84-0 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar-fluoro-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



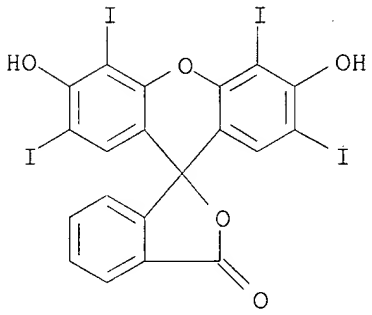
D1—F

RN 327155-85-1 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar,ar-difluoro-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



2 ( D1—F )

RN 327155-86-2 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar,ar,ar-trifluoro-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



3 ( D1—F )

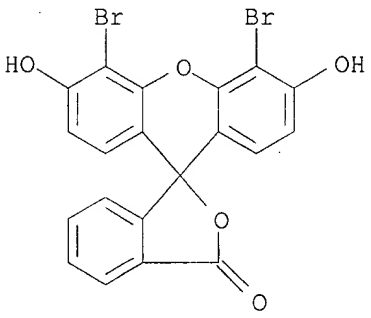
AB Chemotherapeutic medicaments and certain medical uses and methods for use of such chemotherapeutic medicaments for treatment of disease in human or animal tissue are described, wherein a primary active component of such medicaments is a halogenated xanthene or halogenated xanthene derivative Preferably, the halogenated xanthene is Rose Bengal or a functional derivative of Rose Bengal. The halogenated xanthenes constitute a family of chemotherapeutic agents that afford selective, persistent accumulation in certain tissues. In preferred embodiments, such medicaments are used for treatment of a variety of conditions affecting the skin, the mouth and digestive tract, the urinary and reproductive tracts, the respiratory tract, the circulatory system, the head and neck, the endocrine and lymphoreticular systems, and various other tissues, such as connective tissues and various tissue surfaces exposed during surgery, as well as various tissues exhibiting microbial or parasitic infection. Medicaments are produced in various formulations useful for intracorporeal or topical administration, included in liquid, semisolid, solid or aerosol delivery vehicles.

L85 ANSWER 10 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:241348 HCAPLUS

DOCUMENT NUMBER: 136:260249
TITLE: Method of treatment of protozoan infections in fish
INVENTOR(S): Blair, Benjamin G.
PATENT ASSIGNEE(S): Jacksonville State University, USA
SOURCE: U.S. Pat. Appl. Publ., 7 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 2002037921 | A1 | 20020328 | US 2001-922403 | 20010803 |
| US 6506791 | B2 | 20030114 | | |

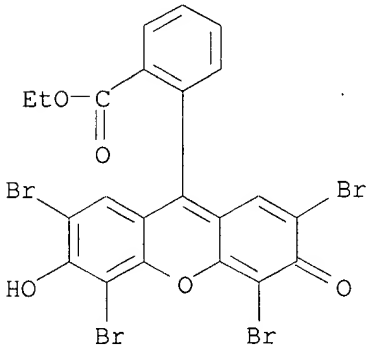
PRIORITY APPLN. INFO.: US 2000-223915P P 20000809
IT **596-03-2**, D And C Orange Number 5
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(treatment of protozoan infections in fish)
RN 596-03-2 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dibromo-3',6'-dihydroxy- (9CI) (CA INDEX NAME)




AB A method of treating protozoan infections in fish comprising introducing a sufficient quantity of one or more photoactive dyes to an aqueous environment containing one or more fish infected with protozoa such that the resulting concentration of the one or more photoactive dyes in the aqueous environment is toxic
to at least some of the protozoa.

L85 ANSWER 11 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:661638 HCAPLUS
DOCUMENT NUMBER: 138:280794
TITLE: Identification of HIV-1 nucleocapsid protein:nucleic acid antagonists with cellular anti-HIV activity
AUTHOR(S): Stephen, Andrew G.; Worthy, Karen M.; Towler, Eric; Mikovits, Judy A.; Sei, Shizuko; Roberts, Paula; Yang, Quan-en; Akee, Rhone K.; Klausmeyer, Paul; McCloud, Thomas G.; Henderson, Lou; Rein, Alan; Covell, David G.; Currens, Michael; Shoemaker, Robert H.; Fisher, Robert J.
CORPORATE SOURCE: Protein Chemistry Laboratory, SAIC-Frederick, Inc., NCI Frederick, Frederick, MD, 21702, USA
SOURCE: Biochemical and Biophysical Research Communications (2002), 296(5), 1228-1237
CODEN: BBRCA9; ISSN: 0006-291X

PUBLISHER: Elsevier Science
DOCUMENT TYPE: Journal
LANGUAGE: English
IT **6359-05-3**, NSC 8670
RL: BSU (Biological study, unclassified); **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(identification of HIV-1 nucleocapsid protein-nucleic acid binding antagonists with cellular anti-HIV activity)
RN 6359-05-3 HCAPLUS
CN Benzoic acid, 2-(2,4,5,7-tetrabromo-6-hydroxy-3-oxo-3H-xanthen-9-yl)-, ethyl ester, potassium salt (9CI) (CA INDEX NAME)




● K

AB The crucial functions of HIV-1 nucleocapsid-p7 protein (NC-p7) at different stages of HIV replication are dependent on its nucleic acid binding properties. In this study, a search has been made to identify antagonists of the interaction between NC-p7 and d(TG)4. A chemical library of .apprx.2000 small mols. (the NCI Diversity Set) was screened, of the 26 active inhibitors that were identified, five contained a xanthenyl ring structure. Further anal. of 63 structurally related compds. led to the identification of 2,3,4,5-tetrachloro-6-(4',5',6'-trihydroxy-3'-oxo-3H-xanthen-9'-yl)benzoic acid, which binds to NC-p7 stoichiometrically. This compound exerted a significant anti-HIV activity in vitro with an IC50 of 16.6±4.3 μM (means±SD). Synthetic variants lacking the two hydroxyls at positions 4' and 5' in the xanthenyl ring system failed to bind NC-p7 and showed significantly less protection against HIV infection. Mol. modeling predicts that these hydroxyl groups would bind to the amide nitrogen of Gly35 with other contacts at the carbonyl oxygens of Gly40 and Lys33.
REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L85 ANSWER 12 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:762819 HCAPLUS
DOCUMENT NUMBER: 135:322728
TITLE: Intracorporeal medicaments for high energy phototherapeutic treatment of disease based on halogenated xanthines
INVENTOR(S): Dees, H. Craig; Scott, Timothy; Wachter, Eric; Fisher, Walter; Smolik, John

PATENT ASSIGNEE(S): Photogen, Inc., USA
SOURCE: PCT Int. Appl., 41 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

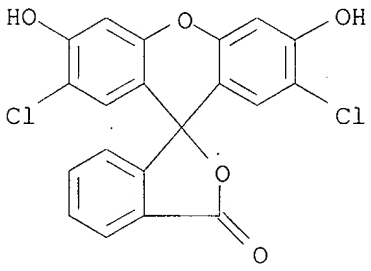
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2001076595 | A1 | 20011018 | WO 2001-US10870 | 20010403 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| CA 2252782 | AA | 19980507 | CA 1997-2252782 | 19971027 |
| EP 1032321 | A1 | 20000906 | EP 1997-948121 | 19971027 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| JP 2001503748 | T2 | 20010321 | JP 1998-520604 | 19971027 |
| IL 128356 | A1 | 20011125 | IL 1997-128356 | 19971027 |
| CA 2252783 | AA | 19980507 | CA 1997-2252783 | 19971028 |
| EP 977592 | A1 | 20000209 | EP 1997-946336 | 19971028 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| JP 2000511929 | T2 | 20000912 | JP 1998-520696 | 19971028 |
| US 5998597 | A | 19991207 | US 1997-989231 | 19971211 |
| JP 2002517419 | T2 | 20020618 | JP 2000-552976 | 19990528 |
| JP 2002528472 | T2 | 20020903 | JP 2000-579116 | 19991026 |
| US 2002033989 | A1 | 20020321 | US 2001-779808 | 20010208 |
| US 6525862 | B2 | 20030225 | | |
| JP 2003526091 | T2 | 20030902 | JP 2001-564686 | 20010307 |
| US 2002001567 | A1 | 20020103 | US 2001-817448 | 20010326 |
| TW 515707 | B | 20030101 | TW 2001-90105458 | 20010329 |
| EP 1292298 | A1 | 20030319 | EP 2001-926602 | 20010403 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| JP 2003531834 | T2 | 20031028 | JP 2001-574113 | 20010403 |
| US 2002122236 | A1 | 20020905 | US 2002-45562 | 20020110 |
| US 6519076 | B2 | 20030211 | | |
| US 2003125376 | A1 | 20030703 | US 2002-331854 | 20021230 |

| PRIORITY APPLN. INFO.: | | |
|---|---|---|
| US 2000-195090P | P | 20000406 |
| US 2000-635276 | A | 20000809 |
| US 2001-817448 | A | 20010326 |
| US 1996-739801 | A | 19961030 |
| US 1996-741370 | A | 19961030 |
| WO 1997-US19249 | W | 19971027 |
| WO 1997-US19527 | W | 19971028 |
| US 1998-72962 | A3 | 19980505 |
| US 1998-96832 | A | 19980612 |
| US 1998-184388 | A | 19981102 |
| US 1998-216787 | A2 | 19981221 |
| WO 1999-US12056 | W | 19990528 |
| WO 1999-US25074 | W | 19991026 |
| US 2000-187958P | P | 20000309 |

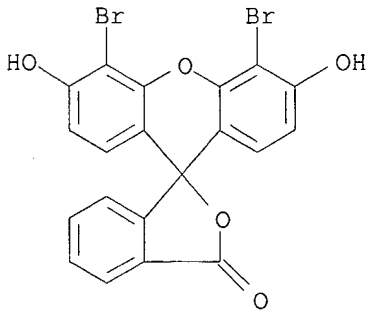
US 2001-779808 A 20010208
WO 2001-US7231 W 20010307
WO 2001-US10870 W 20010403

IT **76-54-0**, 2',7'-Dichlorofluorescein **596-03-2**, Solvent Red 72 **2320-38-9**, 2',4',5',7'-Tetrachlorofluorescein **2320-96-9**, 4',5'-Dichlorofluorescein **4372-02-5**, Dibromofluorescein **6262-21-1**, 4,5,6,7-Tetrachlorofluorescein **6359-05-3**, Ethyl Eosin **33239-19-9**, Diiodofluorescein **108741-02-2**, Trichloroerythrosin **195136-60-8**, 2',4,5,6,7,7'-Hexafluorofluorescein **198139-40-1**, 2',7'-Dichloro-4,5,,6,7-tetrafluorofluorescein **327155-79-3**, Monobromoerythrosine **327155-80-6**, Dibromoerythrosine **327155-81-7**, Tribromoerythrosine **327155-82-8**, Monochloroerythrosine **327155-83-9**, Dichloroerythrosine **327155-84-0**, Monofluoroerythrosine **327155-85-1**, Difluoroerythrosine **327155-86-2**, Trifluoroerythrosine **367514-47-4**
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(intracorporeal delivery of halogenated xanthines for phototherapy)

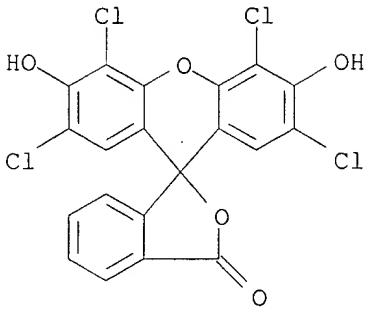
RN 76-54-0 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 2',7'-dichloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



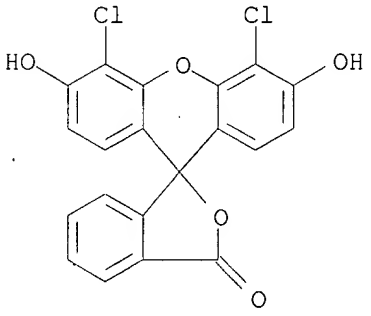

RN 596-03-2 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dibromo-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



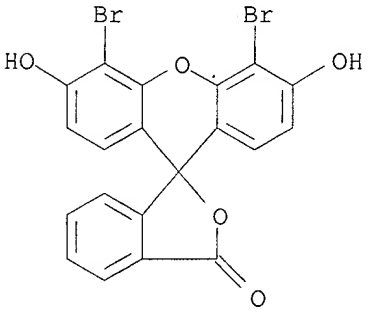

RN 2320-38-9 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 2',4',5',7'-tetrachloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



RN 2320-96-9 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dichloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)

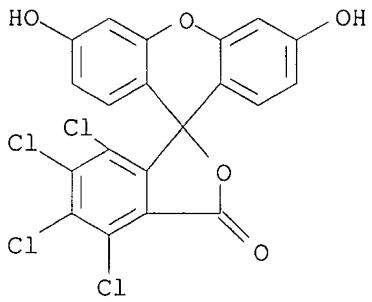


RN 4372-02-5 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dibromo-3',6'-dihydroxy-, disodium salt (9CI) (CA INDEX NAME)

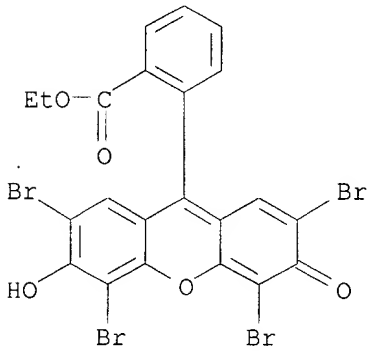


●2 Na

RN 6262-21-1 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4,5,6,7-tetrachloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)

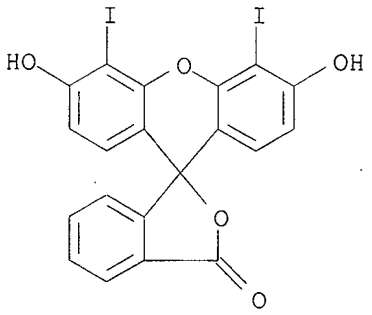


RN 6359-05-3 HCAPLUS
CN Benzoic acid, 2-(2,4,5,7-tetrabromo-6-hydroxy-3-oxo-3H-xanthen-9-yl)-, ethyl ester, potassium salt (9CI) (CA INDEX NAME)



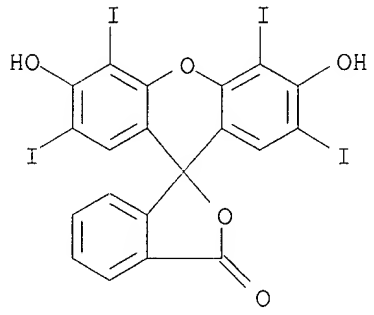
● K

RN 33239-19-9 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 3',6'-dihydroxy-4',5'-diiodo-, disodium salt (9CI) (CA INDEX NAME)



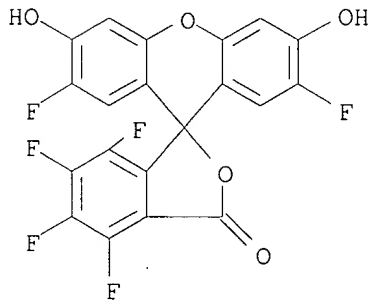
2 Na

RN 108741-02-2 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar,ar,ar-trichloro-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)

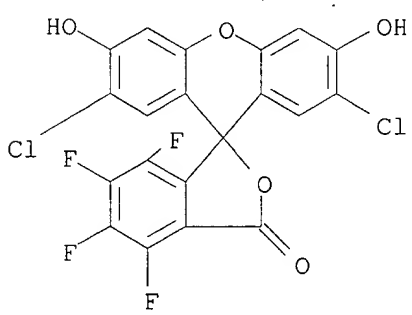


3 ( D1—Cl )

RN 195136-60-8 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 2',4,5,6,7,7'-hexafluoro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)

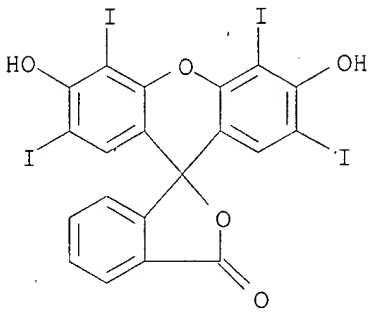


RN 198139-40-1 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 2',7'-dichloro-4,5,6,7-tetrafluoro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



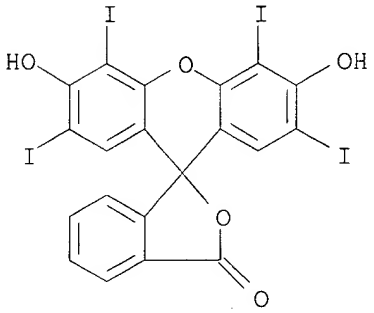
RN 327155-79-3 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar-bromo-3',6'-dihydroxy-

2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



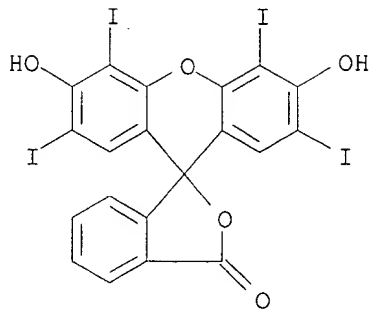
D1—Br

RN 327155-80-6 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar,ar-dibromo-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



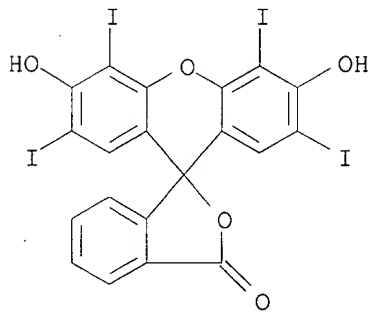
2 ( D1—Br )

RN 327155-81-7 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar,ar,ar-tribromo-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



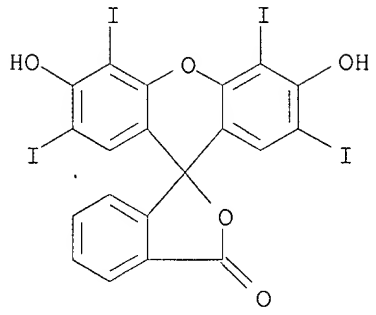
3 ( D1—Br )

RN 327155-82-8 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar-chloro-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



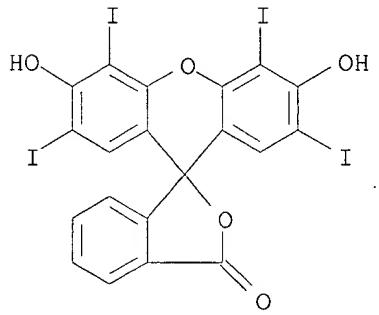
D1—Cl

RN 327155-83-9 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar,ar-dichloro-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



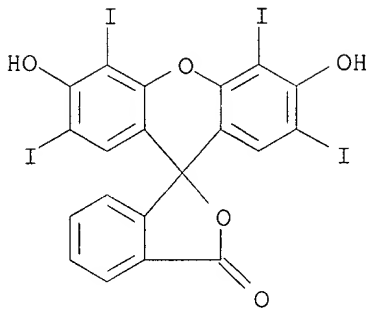
2 ( D1—Cl )

RN 327155-84-0 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar-fluoro-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



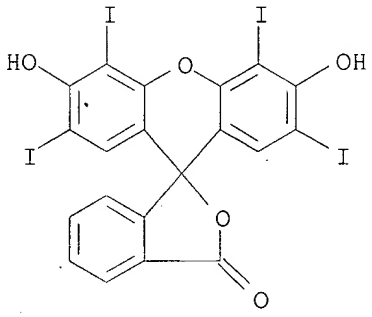
D1—F

RN 327155-85-1 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar,ar-difluoro-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



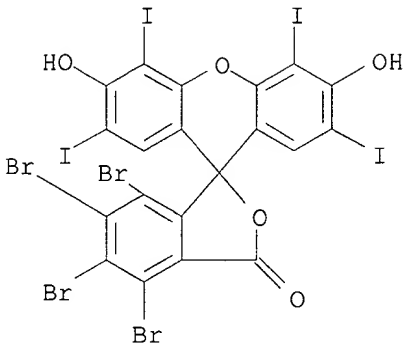
2 ( D1—F )

RN 327155-86-2 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar,ar,ar-trifluoro-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



3 ( D1—F )

RN 367514-47-4 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4,5,6,7-tetrabromo-3',6'-dihydroxy-2',4',5',7'-tetraiodo-, disodium salt (9CI) (CA INDEX NAME)



●2 Na

AB New intracorporeal radiodense medicaments and certain medical uses and methods for use of such high energy phototherapeutic medicaments for treatment of human or animal tissue are described, wherein a primary active component of such medicaments is a halogenated xanthene or halogenated xanthene derivative in a concentration of 0.001-20%.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L85 ANSWER 13 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:730548 HCAPLUS
DOCUMENT NUMBER: 135:262218
TITLE: Intracorporeal medicaments for photodynamic treatment of disease
INVENTOR(S): Dees, H. Craig; Scott, Timothy; Wachter, Eric; Fisher, Walter; Smolik, John
PATENT ASSIGNEE(S): Photogen, Inc., USA
SOURCE: PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2001072301 | A1 | 20011004 | WO 2001-US8924 | 20010320 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| CA 2252782 | AA | 19980507 | CA 1997-2252782 | 19971027 |
| EP 1032321 | A1 | 20000906 | EP 1997-948121 | 19971027 |
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| JP 2001503748 | T2 | 20010321 | JP 1998-520604 | 19971027 |

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| IL 128356 | A1 | 20011125 | IL 1997-128356 | 19971027 | |
| CA 2252783 | AA | 19980507 | CA 1997-2252783 | 19971028 | |
| EP 977592 | A1 | 20000209 | EP 1997-946336 | 19971028 | |
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| JP 2000511929 | T2 | 20000912 | JP 1998-520696 | 19971028 | |
| US 5998597 | A | 19991207 | US 1997-989231 | 19971211 | |
| JP 2002517419 | T2 | 20020618 | JP 2000-552976 | 19990528 | |
| JP 2002528472 | T2 | 20020903 | JP 2000-579116 | 19991026 | |
| US 2002033989 | A1 | 20020321 | US 2001-779808 | 20010208 | |
| US 6525862 | B2 | 20030225 | | | |
| US 2001022970 | A1 | 20010920 | US 2001-799785 | 20010306 | |
| JP 2003526091 | T2 | 20030902 | JP 2001-564686 | 20010307 | |
| EP 1284727 | A1 | 20030226 | EP 2001-920579 | 20010320 | |
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| BR 2001009446 | A | 20030624 | BR 2001-9446 | 20010320 | |
| JP 2003528143 | T2 | 20030924 | JP 2001-570262 | 20010320 | |
| TW 515707 | B | 20030101 | TW 2001-90105458 | 20010329 | |
| US 2002122236 | A1 | 20020905 | US 2002-45562 | 20020110 | |
| US 6519076 | B2 | 20030211 | | | |

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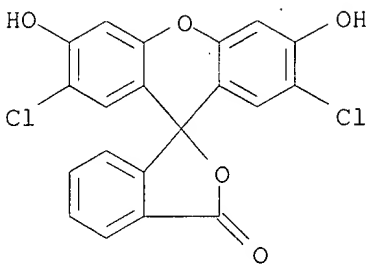
| PRIORITY APPLN. INFO.: | US 2000-191803P | P | 20000324 |
| | US 2001-799785 | A | 20010306 |
| | US 1996-739801 | A | 19961030 |
| | US 1996-741370 | A | 19961030 |
| | WO 1997-US19249 | W | 19971027 |
| | WO 1997-US19527 | W | 19971028 |
| | US 1998-72407 | A2 | 19980504 |
| | US 1998-72962 | A3 | 19980505 |
| | US 1998-96832 | A | 19980612 |
| | US 1998-130041 | A3 | 19980806 |
| | US 1998-184388 | A | 19981102 |
| | US 1998-216787 | A3 | 19981221 |
| | WO 1999-US12056 | W | 19990528 |
| | US 1999-149015P | P | 19990813 |
| | WO 1999-US25074 | W | 19991026 |
| | US 2000-187958P | P | 20000309 |
| | US 2001-779808 | A | 20010208 |
| | WO 2001-US7231 | W | 20010307 |
| | WO 2001-US8924 | W | 20010320 |

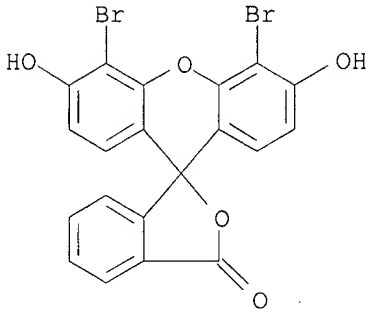
IT **76-54-0**, 2',7'-Dichlorofluorescein **596-03-2**, solvent red 72 **2320-38-9**, 2',4',5',7'-Tetrachlorofluorescein **2320-96-9**, 4',5'-Dichlorofluorescein **4372-02-5**, Dibromofluorescein **6262-21-1**, 4,5,6,7-Tetrachlorofluorescein **6359-05-3**, Ethyl eosin **31395-16-1 185318-74-5**, 4,5,6,7-Tetrafluorofluorescein **195136-60-8**, 2',4,5,6,7,7'-Hexafluorofluorescein **198139-40-1**, 2',7'-Dichloro-4,5,6,7-tetrafluorofluorescein **327029-69-6**
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(intracorporeal medicaments for photodynamic treatment of disease)

RN 76-54-0 HCAPLUS

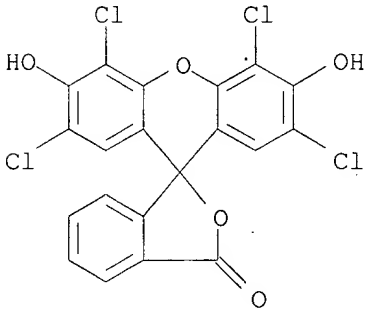
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 2',7'-dichloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



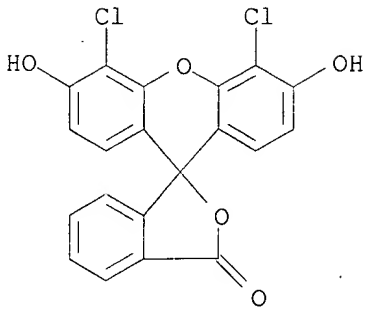
RN 596-03-2 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dibromo-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



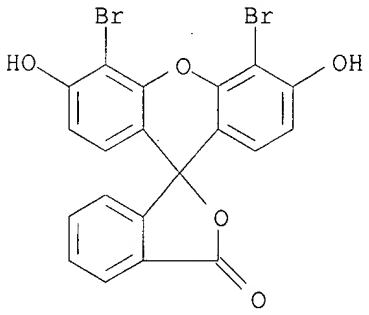
RN 2320-38-9 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 2',4',5',7'-tetrachloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



RN 2320-96-9 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dichloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)

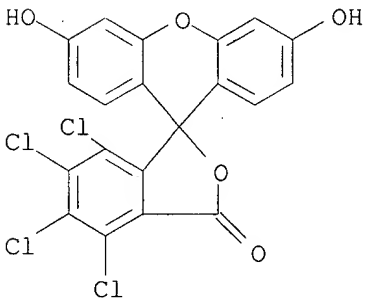


RN 4372-02-5 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dibromo-3',6'-dihydroxy-, disodium salt (9CI) (CA INDEX NAME)

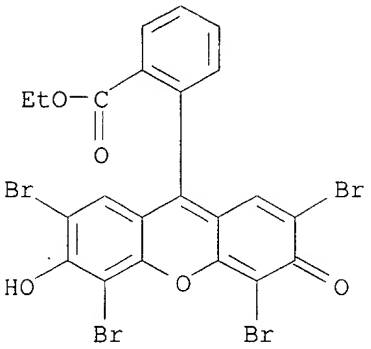


●2 Na

RN 6262-21-1 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4,5,6,7-tetrachloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)

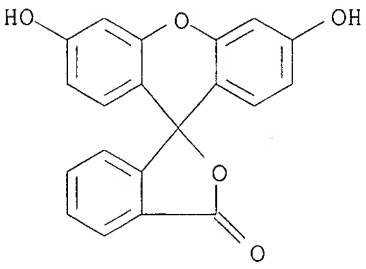


RN 6359-05-3 HCAPLUS
CN Benzoic acid, 2-(2,4,5,7-tetrabromo-6-hydroxy-3-oxo-3H-xanthen-9-yl)-, ethyl ester, potassium salt (9CI) (CA INDEX NAME)



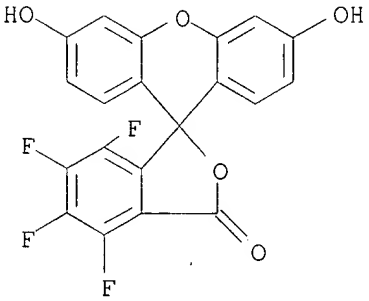
● K

RN 31395-16-1 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 3',6'-dihydroxydiiodo- (9CI) (CA INDEX NAME)



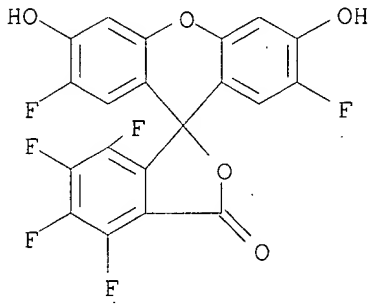
2 ( D1— I )

RN 185318-74-5 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4,5,6,7-tetrafluoro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)

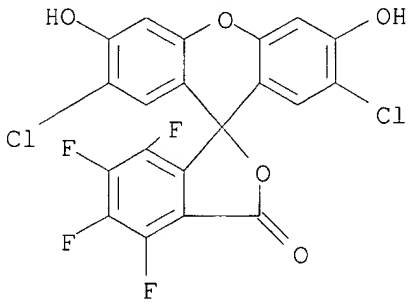


RN 195136-60-8 HCAPLUS

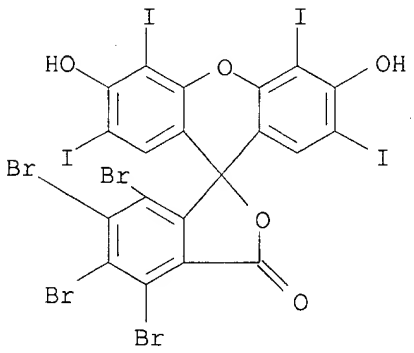
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 2',4,5,6,7,7'-hexafluoro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



RN 198139-40-1 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 2',7'-dichloro-4,5,6,7-tetrafluoro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



RN 327029-69-6 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4,5,6,7-tetrabromo-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



AB New intracorporeal photodynamic medicaments and certain medical uses and methods for use of such photodynamic medicaments for treatment of disease in human or animal are described wherein a primary active component of such medicaments is a halogenated xanthene or halogenated xanthene derivative The medicament further comprises a targeting moiety such as an antibody, complexing agent or encapsulating vehicle. It is formulated as a liquid,

semisolid, solid or aerosol, and includes adjuvants such as stabilizers and tissue penetrating agents. The formulations are suitable for delivery via various conventional modes and routes such as intraarterial, intrabronchial, intrarenal, intranasal, intraocular, etc. The medicament is used for treatment of various conditions including surgical conditions and infections. An example is given on the effect of photodynamic therapy with Rose Bengal or indocyanine green on breast and renal adenocarcinoma in mice.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L85 ANSWER 14 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:137015 HCAPLUS
DOCUMENT NUMBER: 134:198044
TITLE: Improved topical medicaments and methods for photodynamic treatment of disease
INVENTOR(S): Dees, H. Craig; Scott, Timothy; Smolik, John; Wachter, Eric; Fisher, Walter
PATENT ASSIGNEE(S): Photogen, Inc., USA
SOURCE: PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2001012181 | A1 | 20010222 | WO 2000-US22050 | 20000810 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| CA 2252782 | AA | 19980507 | CA 1997-2252782 | 19971027 |
| EP 1032321 | A1 | 20000906 | EP 1997-948121 | 19971027 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| JP 2001503748 | T2 | 20010321 | JP 1998-520604 | 19971027 |
| IL 128356 | A1 | 20011125 | IL 1997-128356 | 19971027 |
| CA 2252783 | AA | 19980507 | CA 1997-2252783 | 19971028 |
| EP 977592 | A1 | 20000209 | EP 1997-946336 | 19971028 |
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| JP 2000511929 | T2 | 20000912 | JP 1998-520696 | 19971028 |
| US 5998597 | A | 19991207 | US 1997-989231 | 19971211 |
| JP 2002517419 | T2 | 20020618 | JP 2000-552976 | 19990528 |
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| JP 2003506488 | T2 | 20030218 | JP 2001-516527 | 20000810 |
| US 2002033989 | A1 | 20020321 | US 2001-779808 | 20010208 |
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| TW 515707 | B | 20030101 | TW 2001-90105458 | | 20010329 |
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PRIORITY APPLN. INFO.:

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|---|---|---|
| US 1999-149015P | P | 19990813 |
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| WO 1997-US19527 | W | 19971028 |
| US 1998-72962 | A3 | 19980505 |
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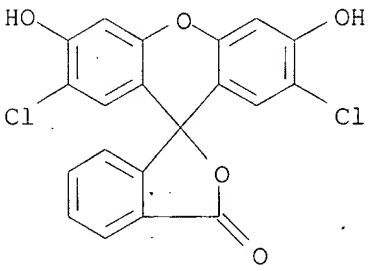
| US 1998-184388 | A | 19981102 |
| WO 1999-US12056 | W | 19990528 |
| WO 1999-US25074 | W | 19991026 |
| US 2000-187958P | P | 20000309 |
| US 2000-635276 | A | 20000809 |
| WO 2000-US22050 | W | 20000810 |
| US 2001-779808 | A | 20010208 |
| WO 2001-US7231 | W | 20010307 |

IT **76-54-0**, 2',7'-Dichlorofluorescein **596-03-2**, Solvent red 72 **2320-38-9**, 2',4',5',7'-Tetrachlorofluorescein **2320-96-9**, 4',5'-Dichlorofluorescein **4372-02-5**, Dibromofluorescein **6262-21-1**, 4,5,6,7-Tetrachlorofluorescein **6359-05-3**, Ethyl eosin **33239-19-9**, Diiodofluorescein **108741-02-2**, Trichloroerythrosin **185318-74-5**, 4,5,6,7,-Tetrafluorofluorescein **195136-60-8**, 2',4,5,6,7,7'-Hexafluorofluorescein **198139-40-1**, 2',7'-Dichloro-4,5,6,7-tetrafluorofluorescein **327029-69-6** **327155-79-3**, Monobromoerythrosin **327155-80-6**, Dibromoerythrosin **327155-81-7**, Tribromoerythrosin **327155-82-8**, Monochloroerythrosin **327155-83-9**, Dichloroerythrosin **327155-84-0**, Monofluoroerythrosin **327155-85-1**, Difluoroerythrosin **327155-86-2**, Trifluoroerythrosin
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(halogenated xanthene transdermal delivery for photodynamic therapy)

RN 76-54-0 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 2',7'-dichloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)




RN 596-03-2 HCAPLUS
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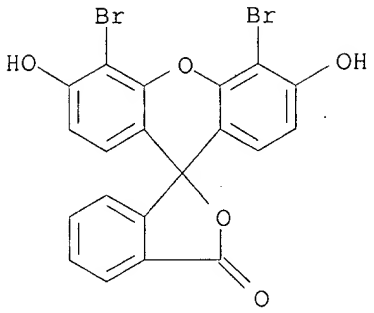
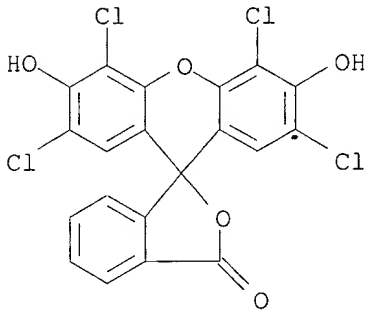
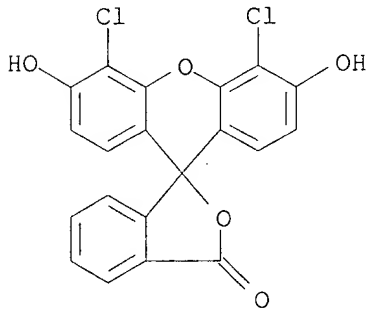


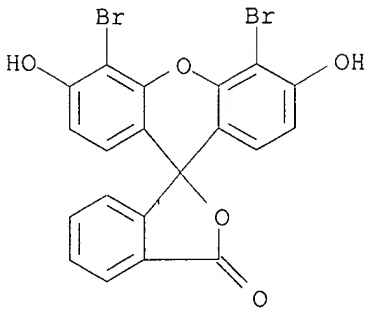

RN 2320-38-9 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 2',4',5',7'-tetrachloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)




RN 2320-96-9 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dichloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)

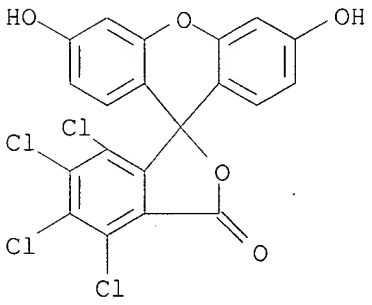



RN 4372-02-5 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dibromo-3',6'-dihydroxy-, disodium salt (9CI) (CA INDEX NAME)

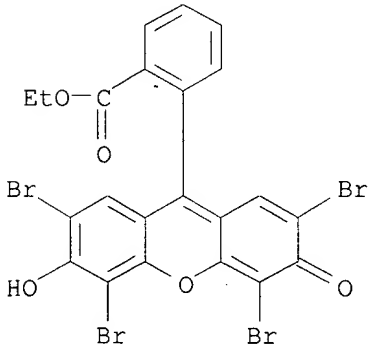


●2 Na

RN 6262-21-1 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4,5,6,7-tetrachloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)

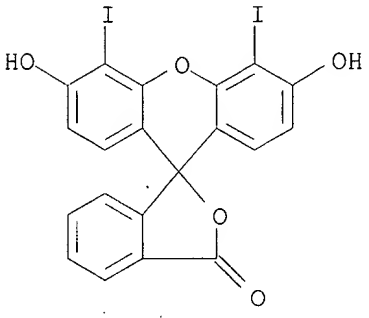


RN 6359-05-3 HCAPLUS
CN Benzoic acid, 2-(2,4,5,7-tetrabromo-6-hydroxy-3-oxo-3H-xanthen-9-yl)-, ethyl ester, potassium salt (9CI) (CA INDEX NAME)



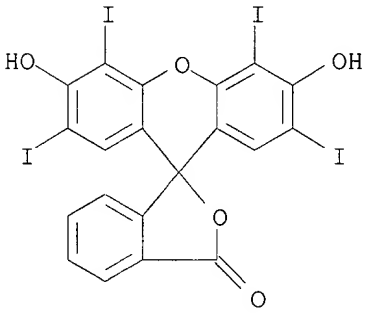
K

RN 33239-19-9 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 3',6'-dihydroxy-4',5'-diiodo-, disodium salt (9CI) (CA INDEX NAME)



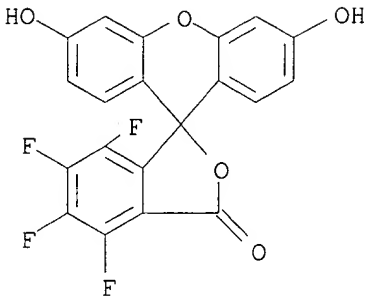
●2 Na

RN 108741-02-2 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar,ar,ar-trichloro-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)

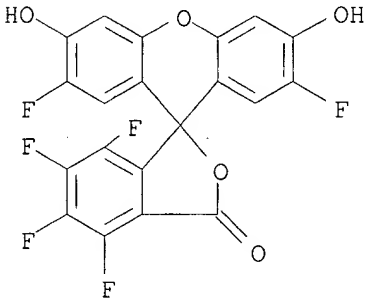


3 ( D1—Cl )

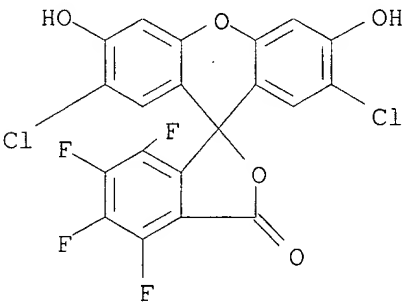
RN 185318-74-5 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4,5,6,7-tetrafluoro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



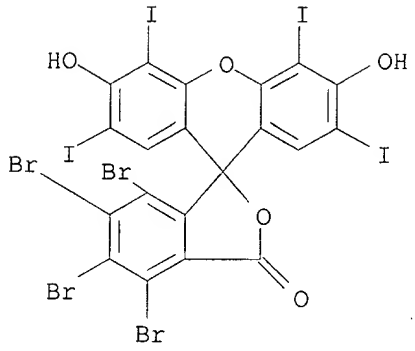
RN 195136-60-8 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 2',4,5,6,7,7'-hexafluoro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



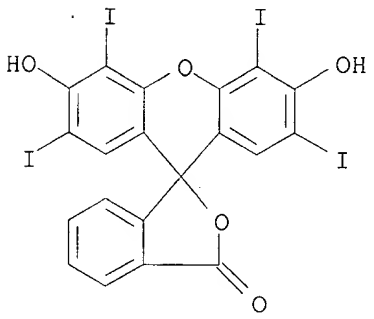
RN 198139-40-1 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 2',7'-dichloro-4,5,6,7-tetrafluoro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



RN 327029-69-6 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4,5,6,7-tetrabromo-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)

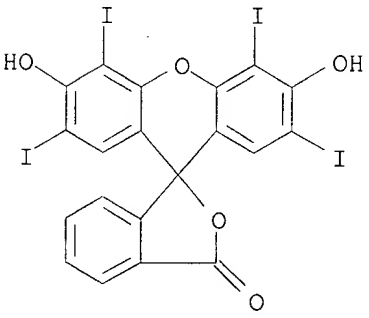


RN 327155-79-3 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar-bromo-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



D1—Br

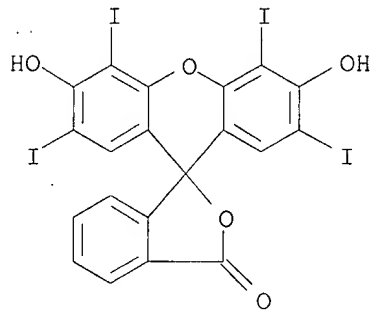
RN 327155-80-6 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar,ar-dibromo-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



2 ( D1—Br )

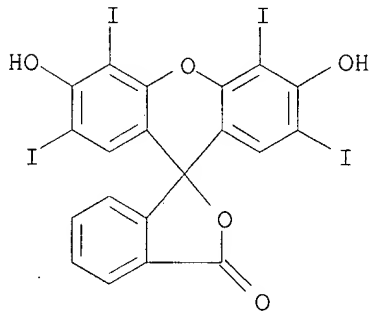
RN 327155-81-7 HCAPLUS

CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar,ar,ar-tribromo-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



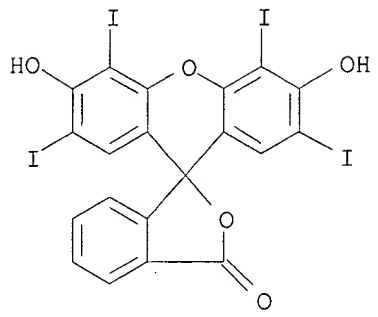
3 ( D1—Br )

RN 327155-82-8 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar-chloro-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



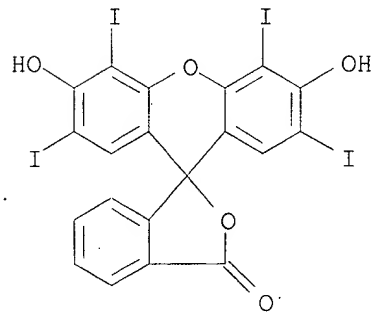
D1—Cl

RN 327155-83-9 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar,ar-dichloro-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



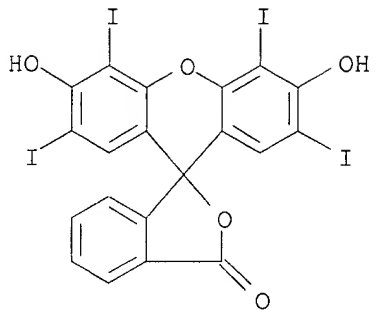
2 ( D1—Cl )

RN 327155-84-0 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar-fluoro-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



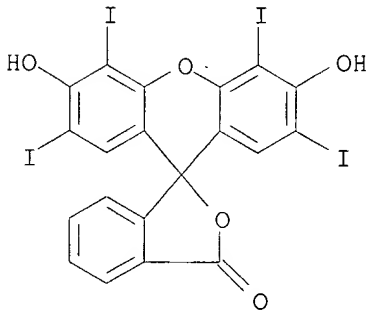
D1—F

RN 327155-85-1 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar,ar-difluoro-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



2 ( D1—F )

RN 327155-86-2 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, ar,ar,ar-trifluoro-3',6'-dihydroxy-2',4',5',7'-tetraiodo- (9CI) (CA INDEX NAME)



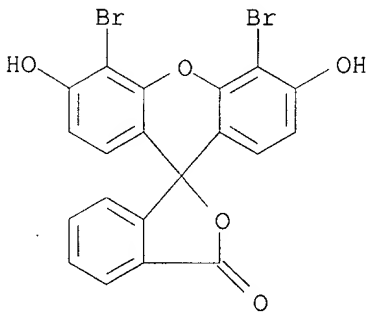
3 ( D1—F )

AB New photodynamic, topically-applicable medicaments and certain medical uses of such photodynamic medicaments for treatment of human or animal tissue are described, wherein a primary active component of such medicaments is a halogenated xanthene. The halogenated xanthenes constitute a family of potent photosensitizers that become photoactivated upon illumination of the treatment site with visible wavelengths of light. In preferred embodiments, such medicaments are used for treatment of a variety of conditions affecting the skin and related organs; the mouth and digestive tract and related organs; the urinary and reproductive tracts and related organs; the respiratory tract and related organs; various other internal or external tissue surfaces, such as tissue surfaces exposed during surgery; and for treatment of a variety of conditions related to microbial or parasitic infection. In another preferred embodiment, such medicaments are produced in various formulations including liquid, semisolid or aerosol delivery vehicles. In the one example given, relative delivery efficacies of transdermal formulations of Rose Bengal applied to murine skin are presented.
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

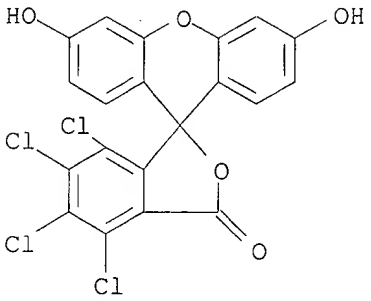
L85 ANSWER 15 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:314177 HCAPLUS
DOCUMENT NUMBER: 134:320852
TITLE: Inhibitory effects of synthetic and natural colorants on carcinogenesis VIII -- Epstein-Barr virus early antigen induction inhibition by azo dye colorants
INVENTOR(S): Kapadia, Govind
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 22 pp., Cont. of U.S. Ser. No. 845,166.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 6225296 | B1 | 20010501 | US 1999-256202 | 19990224 |
| US 6267946 | B1 | 20010731 | US 1999-256204 | 19990224 |
| US 6284224 | B1 | 20010904 | US 1999-256201 | 19990224 |
| US 6291215 | B1 | 20010918 | US 1999-256205 | 19990224 |

PRIORITY APPLN. INFO.: US 1996-22638P P 19960724
US 1997-845166 A1 19970421
OTHER SOURCE(S): MARPAT 134:320852
IT **596-03-2 6262-21-1**, Tetrachlorofluorescein
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(colorant inhibition of carcinogenesis, and Epstein-Barr virus early antigen induction inhibition by azo dye colorant)
RN 596-03-2 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dibromo-3',6'-dihydroxy- (9CI) (CA INDEX NAME)




RN 6262-21-1 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4,5,6,7-tetrachloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



AB A method is disclosed for inhibiting Epstein-Barr virus early antigen induction in Epstein-Barr virus genome-carrying cells which have been cultivated in vitro in a medium containing at least one chemical selected from tumor-inducing chems. and tumor-promoting chems. by adding an effective amount of a synthetic colorant to the medium, wherein the synthetic colorant is an aromatic azo dye.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

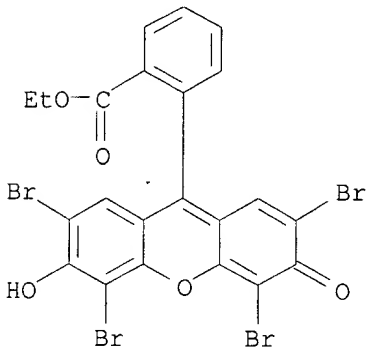
L85 ANSWER 16 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:314167 HCAPLUS
DOCUMENT NUMBER: 134:331625
TITLE: Semi-interpenetrating or interpenetrating polymer networks for drug delivery and tissue engineering
INVENTOR(S): Langer, Robert S.; Elisseeff, Jennifer H.; Anseth, Kristi; Sims, Derek
PATENT ASSIGNEE(S): Massachusetts Institute of Technology, USA; University Technology Corporation; The General Hospital Hospital Corporation
SOURCE: U.S., 15 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 6224893 | B1 | 20010501 | US 1997-862740 | 19970523 |
| WO 9852543 | A1 | 19981126 | WO 1998-US10626 | 19980522 |
| W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, GH, GW, HU, ID, IL, IS, JP, KG, KP, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| AU 9875956 | A1 | 19981211 | AU 1998-75956 | 19980522 |
| AU 726890 | B2 | 20001123 | | |
| EP 1011633 | A1 | 20000628 | EP 1998-923737 | 19980522 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| JP 2002503230 | T2 | 20020129 | JP 1998-550732 | 19980522 |
| NZ 501339 | A | 20020201 | NZ 1998-501339 | 19980522 |

PRIORITY APPLN. INFO.: US 1997-41881P P 19970411
US 1997-862740 A 19970523

WO 1998-US10626 W 19980522

IT **6359-05-3**, Ethyl eosin
RL: CAT (Catalyst use); POF (Polymer in formulation); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(semi-interpenetrating or interpenetrating polymer networks for drug delivery and tissue engineering)
RN 6359-05-3 HCAPLUS
CN Benzoic acid, 2-(2,4,5,7-tetrabromo-6-hydroxy-3-oxo-3H-xanthen-9-yl)-, ethyl ester, potassium salt (9CI) (CA INDEX NAME)




● K

AB Compns. for tissue engineering and drug delivery have been developed based on solns. of two or more polymers which form semi-interpenetrating or interpenetrating polymer networks upon exposure to active species following injection at a site in a patient in need thereof. The polymers crosslink to themselves but not to each other; semi-interpenetrating networks are formed when only one of the polymers crosslink. The resulting viscous solns. retain the biol. active mols. or cells at the site of injection until release or tissue formation, respectfully, occurs. As a result of studies conducted with polymer-cell suspensions forming interpenetrating polymer networks, it has been determined that polymer solns. can be formulated wherein the active species is provided by exposure of the polymer solution to an exogenous source of active species, typically electromagnetic radiation, preferably light. Studies demonstrate that light will penetrate through skin, body fluids (such as synovial fluid) and membranes and polymerize the polymer solns. The polymer solns. can be crosslinked ionically or covalently, to form a hydrogel, semi-interpenetrating polymer network or an interpenetrating polymer network. An example illustrates the creation of a photopolymd. succinic acid anhydride/PEO polymer and release fo compds. from this polymer.
REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L85 ANSWER 17 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:442009 HCAPLUS
DOCUMENT NUMBER: 133:64103
TITLE: High energy phototherapeutic agents
INVENTOR(S): Dees, H. Craig; Scott, Timothy; Smolik, John; Wachter, Eric
PATENT ASSIGNEE(S): Photogen, Inc., USA
SOURCE: PCT Int. Appl., 25 pp.

CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2000037927 | A1 | 20000629 | WO 1999-US30156 | 19991216 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| CA 2252782 | AA | 19980507 | CA 1997-2252782 | 19971027 |
| EP 1032321 | A1 | 20000906 | EP 1997-948121 | 19971027 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| JP 2001503748 | T2 | 20010321 | JP 1998-520604 | 19971027 |
| IL 128356 | A1 | 20011125 | IL 1997-128356 | 19971027 |
| CA 2252783 | AA | 19980507 | CA 1997-2252783 | 19971028 |
| EP 977592 | A1 | 20000209 | EP 1997-946336 | 19971028 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| JP 2000511929 | T2 | 20000912 | JP 1998-520696 | 19971028 |
| US 5998597 | A | 19991207 | US 1997-989231 | 19971211 |
| US 6331286 | B1 | 20011218 | US 1998-216787 | 19981221 |
| JP 2002517419 | T2 | 20020618 | JP 2000-552976 | 19990528 |
| JP 2002528472 | T2 | 20020903 | JP 2000-579116 | 19991026 |
| BR 9916398 | A | 20010911 | BR 1999-16398 | 19991216 |
| EP 1192450 | A1 | 20020403 | EP 1999-967402 | 19991216 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| JP 2002533355 | T2 | 20021008 | JP 2000-589937 | 19991216 |
| US 2002033989 | A1 | 20020321 | US 2001-779808 | 20010208 |
| US 6525862 | B2 | 20030225 | | |
| JP 2003526091 | T2 | 20030902 | JP 2001-564686 | 20010307 |
| TW 515707 | B | 20030101 | TW 2001-90105458 | 20010329 |
| US 2002122236 | A1 | 20020905 | US 2002-45562 | 20020110 |
| US 6519076 | B2 | 20030211 | | |
| US 2003125376 | A1 | 20030703 | US 2002-331854 | 20021230 |

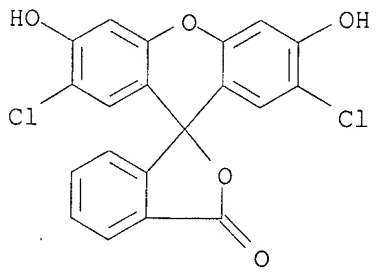
PRIORITY APPLN. INFO.:

| | | |
|---|---|---|
| US 1998-216787 | A | 19981221 |
| US 1996-739801 | A | 19961030 |
| US 1996-741370 | A | 19961030 |
| WO 1997-US19249 | W | 19971027 |
| WO 1997-US19527 | W | 19971028 |
| US 1998-72962 | A3 | 19980505 |
| US 1998-96832 | A | 19980612 |
| US 1998-184388 | A | 19981102 |
| WO 1999-US12056 | W | 19990528 |
| WO 1999-US25074 | W | 19991026 |
| WO 1999-US30156 | W | 19991216 |
| US 2000-187958P | P | 20000309 |
| US 2000-195090P | P | 20000406 |
| US 2001-779808 | A | 20010208 |
| WO 2001-US7231 | W | 20010307 |

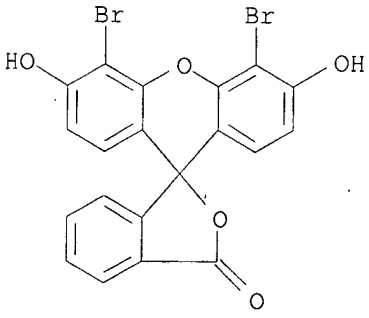
US 2001-817448 A3 20010326

IT **76-54-0**, 2',7'-DichloroFluorescein **596-03-2**, Solvent Red 72 **2320-38-9**, 2',4',5'7'-Tetrachlorofluorescein **2320-96-9**, 4',5'-DichloroFluorescein **4372-02-5**, DibromoFluorescein **6262-21-1**, 4,5,6,7-TetrachloroFluorescein **6359-05-3**, Ethyl eosin **31395-16-1**, Diiodofluorescein
RL: PRP (Properties); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(high energy phototherapeutic agents)

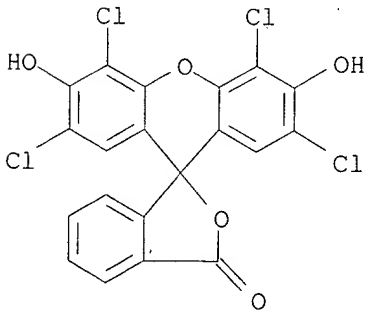
RN 76-54-0 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 2',7'-dichloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



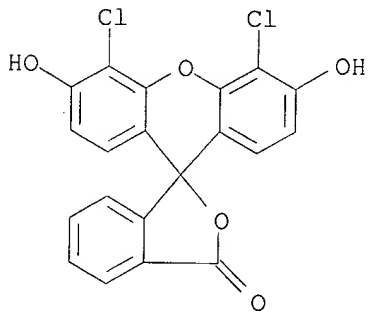

RN 596-03-2 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dibromo-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



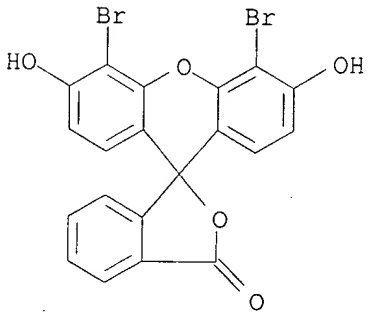

RN 2320-38-9 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 2',4',5',7'-tetrachloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



RN 2320-96-9 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dichloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)

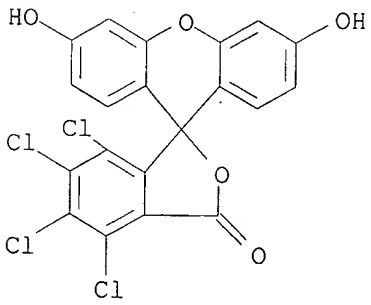



RN 4372-02-5 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dibromo-3',6'-dihydroxy-, disodium salt (9CI) (CA INDEX NAME)



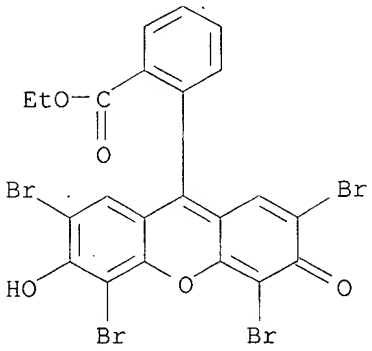

●2 Na

RN 6262-21-1 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4,5,6,7-tetrachloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



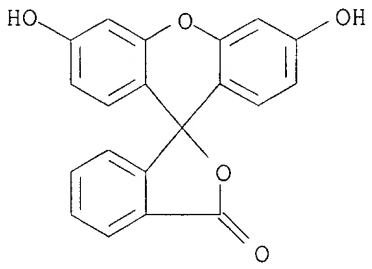

RN 6359-05-3 HCAPLUS

CN Benzoic acid, 2-(2,4,5,7-tetrabromo-6-hydroxy-3-oxo-3H-xanthen-9-yl)-, ethyl ester, potassium salt (9CI) (CA INDEX NAME)



● K

RN 31395-16-1 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 3',6'-dihydroxydiiodo- (9CI) (CA INDEX NAME)



2 ( D1—I )

AB A high energy phototherapeutic agent or radiosensitizer comprises a halogenated xanthene, or an agent that exhibits a preference for concentration in biol. sensitive structures in diseased tissues. Some examples of the halogenated xanthenes such as dibromo- or diiodofluorescein and their properties are given.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L85 ANSWER 18 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:869583 HCAPLUS
DOCUMENT NUMBER: 134:27006
TITLE: Pyronine B analogs as imaging agents and probes for diagnosis of diseases related to amyloid accumulation
INVENTOR(S): Kudo, Koji; Suemoto, Takahiro; Suzuki, Masako; Tojo, Hitomi; Shimazu, Hiroshi

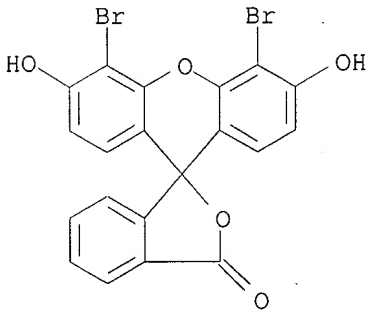
PATENT ASSIGNEE(S): BF Kenkyusho K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 2000344684 | A2 | 20001212 | JP 2000-80082 | 20000322 |

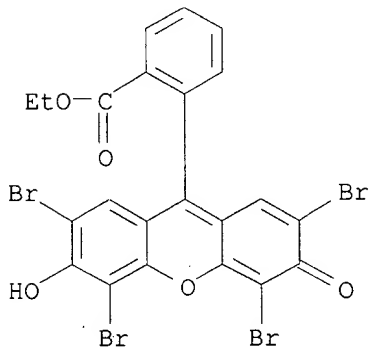
PRIORITY APPLN. INFO.: JP 1999-83816 A 19990326

IT **596-03-2 6359-05-3 31395-16-1**
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(pyronine B analogs as imaging agents and probes for diagnosis of diseases related to amyloid accumulation)

RN 596-03-2 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dibromo-3',6'-dihydroxy- (9CI) (CA INDEX NAME)

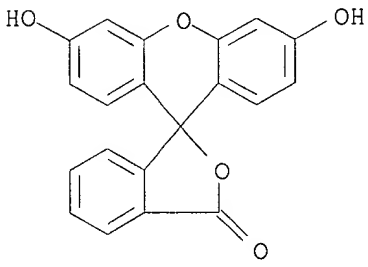



RN 6359-05-3 HCAPLUS
CN Benzoic acid, 2-(2,4,5,7-tetrabromo-6-hydroxy-3-oxo-3H-xanthen-9-yl)-, ethyl ester, potassium salt (9CI) (CA INDEX NAME)



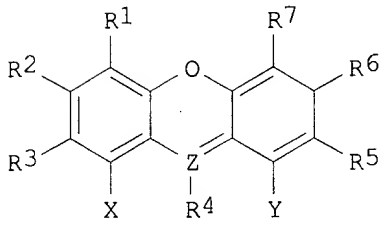

K

RN 31395-16-1 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 3',6'-dihydroxydiiodo- (9CI) (CA INDEX NAME)



2 ( D1-I )

GI



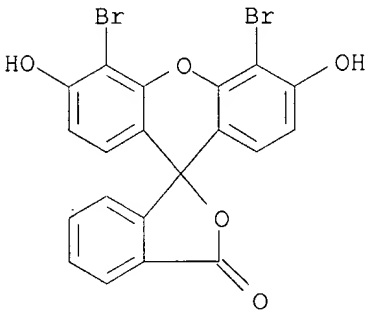
I

AB Pyronine B analogs (I; R1, R7 = H, halogen, OH; R2, R6 = H, halogen, OH, =O, NHR' NR'R'', with R', R'' = H, C1-4 alkyl, OH, halogen, -SO3H, etc.; R3, R5 = H, halogen, etc.; R4 = H, C1-4 alkyl and alkylcarboxyl, halogen, OH, etc., or non-exit; X, Y = H, halogen; Z = C, N; X and R3 or Y and R5 can be forming a Ph group) and their radioactive (11C, 13N, 15O, or 18F)-labeled compds., including tetramethylrosamine chloride, and salts are claimed as imaging agents and probes for diagnosis of diseases related to amyloid accumulation.

L85 ANSWER 19 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:120809 HCAPLUS
DOCUMENT NUMBER: 132:171121
TITLE: Method for discoloration prevention of pigments in pharmaceutical and cosmetic compositions
INVENTOR(S): Goto, Hajime; Taguchi, Shinya; Iida, Norio
PATENT ASSIGNEE(S): Lion Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|

JP 2000053522 A2 20000222 JP 1998-226863 19980811
PRIORITY APPLN. INFO.: JP 1998-226863 19980811
IT **596-03-2**, Japan orange 201
RL: BUU (Biological use, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(discoloration prevention agent containing pigments and anion-supplying agents for pharmaceuticals or cosmetics)
RN 596-03-2 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dibromo-3',6'-dihydroxy- (9CI) (CA INDEX NAME)




AB The invention relates to a method for preventing discoloration of pigments in pharmaceutical and cosmetic compns., wherein the discoloration is prevented by the use of an anion-supplying agent having a chelate stability constant with Cu, Fe, or Ni ion (Log KMA) ≥ 7 at pH = 3-10 in the compns. An indomethacin ointment (pH = 6.5) containing yellow No.4 0.0001, EDTA·4Na (log KMA = 18.79) 0.02 %, and other ingredients was prepared

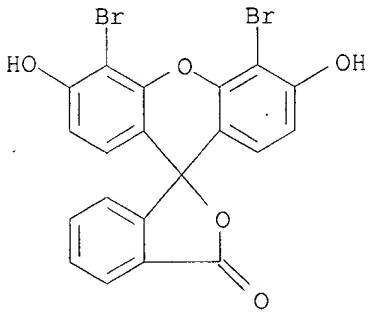
L85 ANSWER 20 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:533934 HCAPLUS
DOCUMENT NUMBER: 131:175076
TITLE: Method and composition for coating wound or protecting animal skin
INVENTOR(S): Huprich, Carl A.; Timms, Leo L.; Hemling, Thomas C.
PATENT ASSIGNEE(S): Iowa State University Research Foundation, Inc., USA
SOURCE: U.S., 7 pp., Cont.-in-part of U. S. Ser. No. 644,009.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 5942239 | A | 19990824 | US 1997-799869 | 19970214 |
| US 5688498 | A | 19971118 | US 1996-644009 | 19960509 |
| WO 9835709 | A1 | 19980820 | WO 1998-US2728 | 19980213 |

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

| | | | | |
|---|---|---|---|---|
| AU 9862776 | A1 | 19980908 | AU 1998-62776 | 19980213 |
| AU 731990 | B2 | 20010412 | | |
| EP 973559 | A1 | 20000126 | EP 1998-905062 | 19980213 |
| EP 973559 | B1 | 20010822 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| NZ 337079 | A | 20000428 | NZ 1998-337079 | 19980213 |
| JP 2000509727 | T2 | 20000802 | JP 1998-535906 | 19980213 |
| AT 204488 | E | 20010915 | AT 1998-905062 | 19980213 |
| ES 2162418 | T3 | 20011216 | ES 1998-905062 | 19980213 |
| PRIORITY APPLN. INFO.: | | | US 1996-644009 A2 | 19960509 |
| | | | US 1997-799869 A | 19970214 |
| | | | WO 1998-US2728 W | 19980213 |

IT **596-03-2**
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(skin protectants containing polyether-polyurethanes and benzoin gums and germicides and dyes in fast-drying solvents)
RN 596-03-2 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dibromo-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



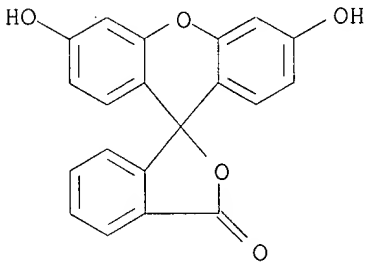

AB A polyether polyurethane/benzoin skin protectant is described which further includes a fast-drying solvent. The skin protectant may optionally include a germicidal agent and/or a dye for better visualization of the protectant on the skin. The skin protectant provides a dry film that is elastic, vapor permeable, water proof, dirt proof, insect proof, aerobic bacteriostatic, and adheres well under environmental conditions. Apparent application viscosity can be adjusted as required for specific needs. A skin-protecting composition contained THF 85.1, Estane 5714 10.6, benzoin gum 4.25, and dyes (e.g. FD&C Red 3) 0.05 %.
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L85 ANSWER 21 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:462758 HCAPLUS
DOCUMENT NUMBER: 131:149103
TITLE: Disposable oral hygiene product comprising waterproof container and porous drug-holding material
INVENTOR(S): Maruoka, Takao
PATENT ASSIGNEE(S): Kanae Kagawa K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 11197217 | A2 | 19990727 | JP 1998-18224 | 19980112 |

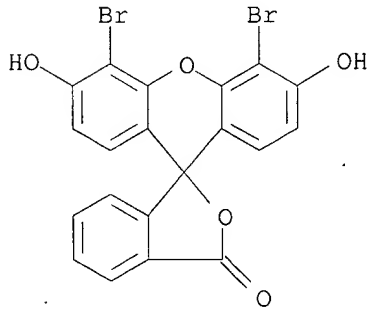
PRIORITY APPLN. INFO.: JP 1998-18224 19980112

IT **31395-16-1,** Diiodofluorescein
RL: BUU (Biological use, unclassified); **THU (Therapeutic use);**
BIOL (Biological study); USES (Uses)
(diiodofluorescein; disposable oral hygiene product comprising waterproof cup and porous material holding drugs, surfactants and/or moisturizers, and optional colorants)
RN 31395-16-1 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 3',6'-dihydroxydiiodo- (9CI) (CA INDEX NAME)



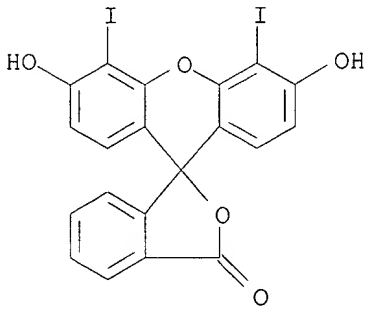

2 ( D1—I )

IT **4372-02-5,** Dibromofluorescein **33239-19-9,** Erythrosine yellowish NA
RL: BUU (Biological use, unclassified); **THU (Therapeutic use);**
BIOL (Biological study); USES (Uses)
(disposable oral hygiene product comprising waterproof cup and porous material holding drugs, surfactants and/or moisturizers, and optional colorants)
RN 4372-02-5 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dibromo-3',6'-dihydroxy-, disodium salt (9CI) (CA INDEX NAME)




2 Na

RN 33239-19-9 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 3',6'-dihydroxy-4',5'-diiodo-, disodium salt (9CI) (CA INDEX NAME)




●2 Na

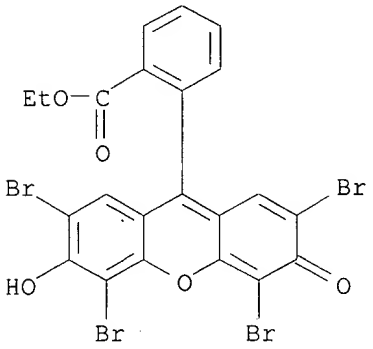
AB The product, which is used by adding H2O to the container to dissolve the drugs for rinsing mouth or preventing and treating tonsillitis, mastitis, etc., comprises a waterproof container and a porous drug-holding material, e.g. porous sachet, woven or nonwoven fabric bag, net, punching sheet, etc., which holds drugs and surfactants and/or moisturizers. Colorants may be added to the drugs to indicate the dissoln. state. The drug-holding material keeps storage-stability of the drug and rapidly releases the drug upon contact with water. A PET nonwoven fabric sheet was impregnated with 1 mL composition containing povidone-iodine 70, glycerin 50, Tween 80 5 mg, and H2O balance and dried. The sheet and H2O were placed in a paper cup and the cup was moderately swung to dissolve the drug within 30 s.

L85 ANSWER 22 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:209004 HCAPLUS
DOCUMENT NUMBER: 130:293613
TITLE: Analytical method for formative components in urine
INVENTOR(S): Inoue, Junya; Nishizaki, Mikiko
PATENT ASSIGNEE(S): Shismekks K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 11083849 | A2 | 19990326 | JP 1997-248835 | 19970912 |

PRIORITY APPLN. INFO.: JP 1997-248835 19970912
IT **6359-05-3**, Ethyl Eosin
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(spectrometry with styrene dye, cyanine dye, xanthene dye, merocyanine dye, or others for detecting urinary formative components and for diagnosing urinary tract diseases)
RN 6359-05-3 HCAPLUS

CN Benzoic acid, 2-(2,4,5,7-tetrabromo-6-hydroxy-3-oxo-3H-xanthen-9-yl)-, ethyl ester, potassium salt (9CI) (CA INDEX NAME)



● K

AB Formative components (enzyme, white blood cell, erythrocyte, crystal, bacteria, etc.) are detected by spectrometry with styrene dye, cyanine dye, xanthene dye, merocyanine dye, or others. The method is useful for diagnosis of urinary tract infection, inflammation, stone, tumor, and other diseases.

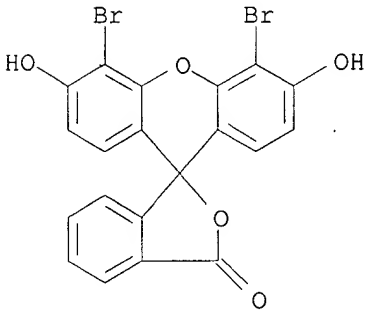
L85 ANSWER 23 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1998:568750 HCAPLUS
DOCUMENT NUMBER: 129:193734
TITLE: Method and composition for coating wound or protecting animal skin
INVENTOR(S): Timms, Leo; Hemling, Thomas C.
PATENT ASSIGNEE(S): Iowa State University Research Foundation, Inc., USA; West Agro Technology; Huprich, Don C.
SOURCE: PCT Int. Appl., 21 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 9835709 | A1 | 19980820 | WO 1998-US2728 | 19980213 |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| US 5942239 | A | 19990824 | US 1997-799869 | 19970214 |
| AU 9862776 | A1 | 19980908 | AU 1998-62776 | 19980213 |
| AU 731990 | B2 | 20010412 | | |
| EP 973559 | A1 | 20000126 | EP 1998-905062 | 19980213 |
| EP 973559 | B1 | 20010822 | | |

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI

| | | | | | |
|---|---|---|---|---|---|
| NZ 337079 | A | 20000428 | NZ 1998-337079 | | 19980213 |
| JP 2000509727 | T2 | 20000802 | JP 1998-535906 | | 19980213 |
| AT 204488 | E | 20010915 | AT 1998-905062 | | 19980213 |
| PRIORITY APPLN. INFO.: | | | US 1997-799869 | A | 19970214 |
| | | | US 1996-644009 | A2 | 19960509 |
| | | | WO 1998-US2728 | W | 19980213 |

IT **596-03-2**, D And C orange number 5
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(as optional dye ingredient; fast-drying skin protectants containing polyether polyurethanes and benzoin gum and solvent)
RN 596-03-2 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dibromo-3',6'-dihydroxy- (9CI) (CA INDEX NAME)




AB A polyether polyurethane/benzoin skin protectant is described which further includes a fast drying solvent. The skin protectant may optionally include a germicidal agent and/or a dye for better visualization of the protectant on the skin. The skin protectant provides a dry film that is elastic, vapor-permeable, water-proof, dirt-proof, insect-proof, aerobic bacteriostatic, and adheres well under environmental conditions. Apparent application viscosity can be adjusted as required for specific needs. A teat dip solution was formulated containing Estane 5714 12.5, benzoin resinoid 5, and THF 100 parts. Teat ends of cows and heifers were dipped into the solution starting .apprx.10 days prepartum and redipped as needed until parturition. Significant reduction in pathogens was reported.

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L85 ANSWER 24 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN

| | |
|---|---|
| ACCESSION NUMBER: | 1998:65809 HCAPLUS |
| DOCUMENT NUMBER: | 128:136533 |
| TITLE: | Xanthene dyes or derivatives as drugs for inducing ultrasonic action and apparatus wherein the drugs are used |
| INVENTOR(S): | Kawabata, Kenichi; Umemura, Shinichiro; Sasaki, Kazuaki; Sugita, Nami |
| PATENT ASSIGNEE(S): | Hitachi, Ltd., Japan; Kawabata, Kenichi; Umemura, Shinichiro; Sasaki, Kazuaki; Sugita, Nami |
| SOURCE: | PCT Int. Appl., 62 pp.<br>CODEN: PIXXD2 |
| DOCUMENT TYPE: | Patent |
| LANGUAGE: | Japanese |
| FAMILY ACC. NUM. COUNT: | 1 |

PATENT INFORMATION:

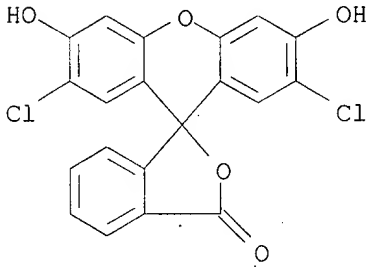
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 9801131 | A1 | 19980115 | WO 1997-JP2285 | 19970702 |

W: CN, JP, KR, US
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

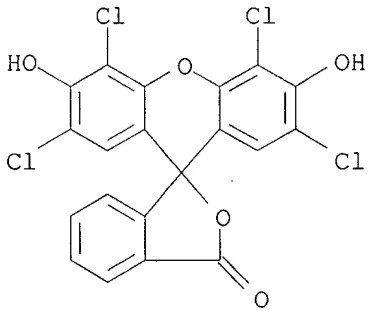
PRIORITY APPLN. INFO.: JP 1996-176207 19960705
JP 1997-31993 19970217

IT **76-54-0 2320-38-9 6262-21-1**
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(xanthene dyes or derivs. as drugs for inducing ultrasonic action and apparatus wherein the drugs are used)

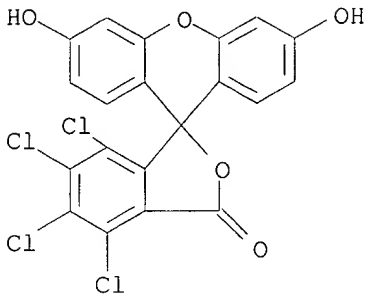
RN 76-54-0 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 2',7'-dichloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



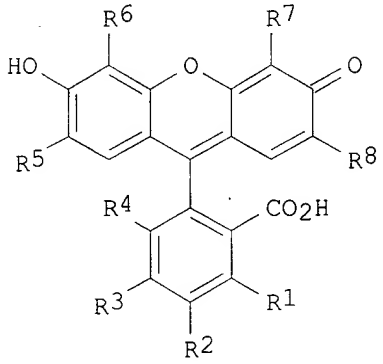

RN 2320-38-9 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 2',4',5',7'-tetrachloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)




RN 6262-21-1 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4,5,6,7-tetrachloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



GI



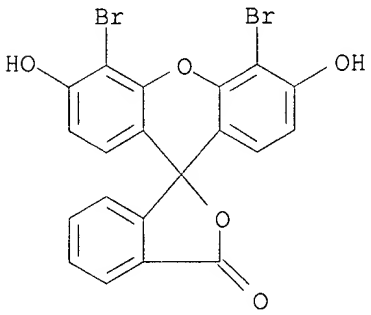
I

AB Drugs containing compds. of xanthene dyes or derivs. thereof (including dimers) having xanthene ring(s) and inducing an ultrasonic action of lowering the threshold of acoustic strength causing acoustic cavitation, (I) wherein any of R1 to R8 bonded to carbon atoms of the xanthene dye skeleton is a functional group capable of chemical binding to a halogeno, thiol or amino group (selected from among halogenated acetamide, maleimide, aziridine, isothiocyanate, succinimide and sulfonyl chloride). Because of being able to lower the threshold, these drugs make it possible to safely treat benign or malignant tumors or stones by the irradiation with ultrasonic waves of a low acoustic strength.

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L85 ANSWER 25 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1998:667385 HCAPLUS
DOCUMENT NUMBER: 130:11895
TITLE: Xanthene dyes as photochemical donors for the nitrogenase reaction
AUTHOR(S): Druzhinin, S. Yu.; Syrtsova, L. A.; Denisov, N. N.; Shkondina, N. I.; Gak, V. Yu.
CORPORATE SOURCE: Institute of Chemical Physics, Russian Academy of Sciences, Chernogolovka, 142432, Russia
SOURCE: Biochemistry (Moscow)(Translation of Biokhimiya (Moscow)) (1998), 63(8), 996-1006
CODEN: BIORAK; ISSN: 0006-2979

PUBLISHER: MAIK Nauka/Interperiodica Publishing
DOCUMENT TYPE: Journal
LANGUAGE: English
IT **596-03-2**, 4',5'-Dibromofluorescein
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)
(xanthene dyes as photochem. donors for the nitrogenase reaction)
RN 596-03-2 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dibromo-3',6'-dihydroxy- (9CI) (CA INDEX NAME)




AB The ability of xanthene dyes to mediate photoinduced reduction of nitrogenase was tested. In addition to eosin, which was studied in the preceding work (Biochem. (Moscow), 1996, 61, 2165-2172), 4',5'-dibromofluorescein (DBF), cyanosine, and erythrosin are effective photodonors of an electron in the presence of NADH. Fluorescein, rhodamine B, rhodamine 6G, and porphyrins are unable to mediate photoinduced reduction of nitrogenase. The mechanism underlying different efficiency of xanthene dyes in this reaction was studied. At high concns., all xanthene dyes tested were shown to inhibit the intramol. electron transfer in nitrogenase. The inhibiting concentration of DBF is 1.5·10-4 M, whereas for other dyes, the inhibiting concns. are less than 1.5·10-4 M. Under otherwise identical conditions, the ATPase activity was inhibited by xanthene dyes to a lesser extent than the nitrogenase activity. DBF, the most effective photodonor, was also studied by differential kinetic pulse laser spectroscopy. Photoinduced reduction of nitrogenase, (Fe-proteinox Mo-Fe-protein)·MgATP or (Av2ox·Av1)·MgATP, was studied within the time range from 0 to 100 ms. Two initial stages of the nitrogenase turnover were detected: photoinduced reduction of Av2 and electron transfer from Av2red to Av1. The kinetics of the photoinduced reduction of Av2·MgADP was studied in the presence of DBF (up to 1.3·10-4 M) both in solution and the complex with Av1. The apparent second-order rate consts. of the photoinduced reduction of Av2·MgADP in solution and the complex with Av1 were determined as 9.7·107 ± 106 and 1.2·108 ± 1.2·107 M-1·sec-1, resp. The rate constant of the second reaction in the presence of another donor (dithionite) is 2500 times less. In complexes with Av1, the photochem. donor system DBF-NADH reduces Av2 more effectively than in free state in solution In the presence of the photochem. donor system, neither photoredn. of Av2 in complexes with Av1 nor electron transfer from Av2red to Av1 are the rate-limiting stages of nitrogenase turnover.

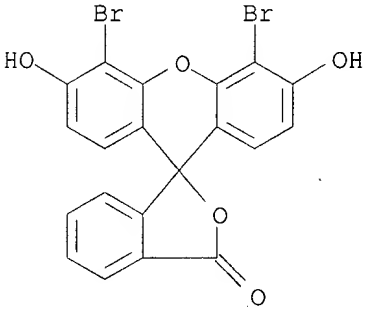
REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L85 ANSWER 26 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1998:397057 HCAPLUS
DOCUMENT NUMBER: 129:156574
TITLE: Cancer chemopreventive activity of synthetic colorants used in foods, pharmaceuticals and cosmetic preparations
AUTHOR(S): Kapadia, Govind J.; Tokuda, Harukuni; Sridhar, Rajagopalan; Balasubramanian, Venkataraman; Takayasu, Junko; Bu, Ping; Enjo, Fumio; Takasaki, Midori; Konoshima, Takao; Nishino, Hoyoku
CORPORATE SOURCE: College of Pharmacy, Nursing allied Health, Department of Pharmaceutical Sciences, Howard University, Washington, DC, 20059, USA
SOURCE: Cancer Letters (Shannon, Ireland) (1998), 129(1), 87-95
CODEN: CALEDQ; ISSN: 0304-3835
PUBLISHER: Elsevier Science Ireland Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

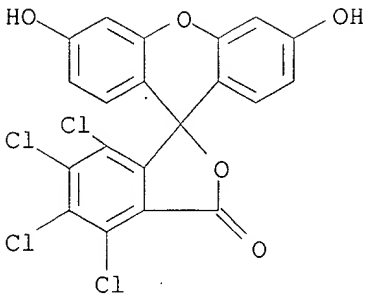
IT **4372-02-5**, Dibromofluorescein **6262-21-1**
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(cancer chemopreventive activity of synthetic colorants used in foods, pharmaceuticals and cosmetic prepns.)

RN 4372-02-5 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dibromo-3',6'-dihydroxy-, disodium salt (9CI) (CA INDEX NAME)




●2 Na

RN 6262-21-1 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4,5,6,7-tetrachloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)




AB In continuation with our studies to uncover cancer chemopreventive effects of non-toxic natural colorants and other products of biol. and synthetic origin, we tested several Food and Drug Administration-approved synthetic colorants for antitumor promoting potential by the in vitro Epstein-Barr virus early antigen activation in Raji cells in response to the tumor promoter 12-O-tetradecanoylphorbol-13-acetate (TPA). Among 29 such colorants used in foods, pharmaceuticals and cosmetics and evaluated in vitro, six of the 10 most effective had an azo group. Three structurally unrelated colorants tested in this assay were also studied in vivo for chemoprevention of 7,12-dimethylbenz[a]anthracene (DMBA)-induced TPA-promoted mouse skin carcinogenesis. The results indicate that tartrazine, indigo carmine and erythrosine are potent inhibitors of skin tumor promotion in mice treated with DMBA and TPA.

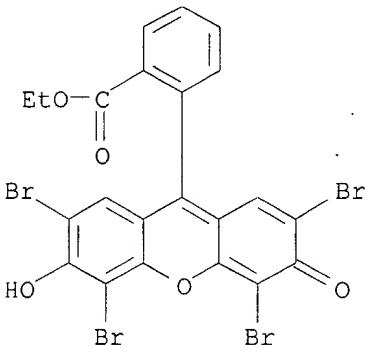
REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L85 ANSWER 27 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1997:717906 HCAPLUS
DOCUMENT NUMBER: 128:368
TITLE: Inhibition of the binding of human IgE to its receptor by tetracyclic compounds for the alleviation of IgE-mediated immune response
INVENTOR(S): Cheng, Y-S. Edmond; Liu, Yuan; Chu, John; Kinet, Jean-Pierre; Jouvin, Marie-Helene; Sudo, Yukio; Qian, Xiuqi
PATENT ASSIGNEE(S): Fuji Immunopharmaceuticals Corp., USA
SOURCE: PCT Int. Appl., 44 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 9740033 | A1 | 19971030 | WO 1997-US6636 | 19970418 |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| AU 9726789 | A1 | 19971112 | AU 1997-26789 | 19970418 |
| US 5965605 | A | 19991012 | US 1997-999348 | 19971229 |

PRIORITY APPLN. INFO.: US 1996-635372 19960419
US 1996-698243 19960815
WO 1997-US6636 19970418

IT **6359-05-3**
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(inhibition of binding of human IgE to FcεRI by tetracyclic compds. for the alleviation of IgE-mediated immune response)
RN 6359-05-3 HCAPLUS
CN Benzoic acid, 2-(2,4,5,7-tetrabromo-6-hydroxy-3-oxo-3H-xanthen-9-yl)-, ethyl ester, potassium salt (9CI) (CA INDEX NAME)

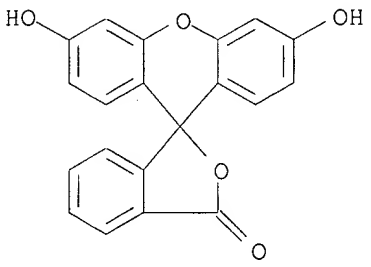


● K

AB Disclosed are chemical agents with unexpected activity to inhibit the interactions between human IgE (IgE) and its receptor (FcεRI) which interactions are known to be involved in triggering allergic responses. The agents may be used to modulate the allergic response in the treatment of various clin. conditions, including rhinitis, asthma, urticaria, atopic dermatitis, and anaphylactic shock. The agents can be formulated for oral, topical or parenteral administration.

L85 ANSWER 28 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1997:689258 HCAPLUS
DOCUMENT NUMBER: 128:140
TITLE: Structure-based identification of an inducer of the low-pH conformational change in the influenza virus hemagglutinin: irreversible inhibition of infectivity
AUTHOR(S): Hoffman, Lucas R.; Kuntz, I. D.; White, Judith M.
CORPORATE SOURCE: Department of Biochemistry and Biophysics, University of California, San Francisco, San Francisco, CA, 94143-0448, USA
SOURCE: Journal of Virology (1997), 71(11), 8808-8820
CODEN: JOVIAM; ISSN: 0022-538X
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
IT **31395-16-1**, Diiodofluorescein
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(structure-based identification of an inducer of the low-pH conformational change in the influenza virus hemagglutinin:

irreversible inhibition of infectivity)
RN 31395-16-1 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 3',6'-dihydroxydiiodo- (9CI) (CA INDEX NAME)



2 ( D1—I )

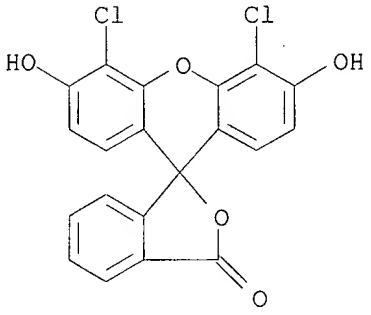
AB Past efforts to employ a structure-based approach to design an inhibitor of the fusion-inducing conformational change in the influenza virus hemagglutinin (HA) yielded a family of small benzoquinones and hydroquinones. The most potent of these, tert-Bu hydroquinone (TBHQ), inhibits both the conformational change in HA from strain X:31 influenza virus and viral infectivity in tissue culture cells with 50% inhibitory concns. in the micromolar range (D. L. Bodian, R. B. Yamasaki, R. L. Buswell, J. F. Stearns, J. M. White, and I. D. Kuntz, Biochem. 32:2967-2978, 1993). A new structure-based inhibitor design search was begun which involved (i) the recently refined crystal structure (2.1-Å resolution) of the HA ectodomain, (ii) new insights into the conformational change, and (iii) improvements in the mol. docking program, DOCK. As a result, we identified new inhibitors of HA-mediated membrane fusion. Like TBHQ, most of these mols. inhibit the conformational change. One of the new compds., however, facilitates rather than inhibits the HA conformational change. Nonetheless, the facilitator, diiodofluorescein, inhibits HA-mediated membrane fusion and, irreversibly, infectivity. We further characterized the effects of inhibitors from both searches on the conformational change and membrane fusion activity of HA as well as on viral infectivity. We also isolated and characterized several mutants resistant to each class of inhibitor. The implications of our results for HA-mediated membrane fusion, anti-influenza virus therapy, and structure-based inhibitor design are discussed.
REFERENCE COUNT: 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L85 ANSWER 29 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1997:308952 HCAPLUS
DOCUMENT NUMBER: 127:49484
TITLE: Stimulating effect of xanthene dyes on immunoglobulin produced in vitro by rat spleen lymphocytes
AUTHOR(S): Kuramoto, Yuichiro; Yamada, Koji; Lim, Beong Ou; Sugano, Michihiro
CORPORATE SOURCE: Lab. Food Sci., Dep. Food Sci. Technol., Faculty Agric., Kyushu Univ., Fukuoka, 812-81, Japan
SOURCE: Bioscience, Biotechnology, and Biochemistry (1997), 61(4), 723-725
CODEN: BBBIEJ; ISSN: 0916-8451

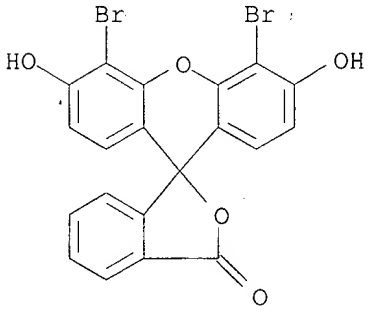
PUBLISHER: Japan Society for Bioscience, Biotechnology, and Agrochemistry
DOCUMENT TYPE: Journal
LANGUAGE: English

IT **2320-96-9**, Dichlorofluorescein **4372-02-5**, Dibromofluorescein **33239-19-9**, Diiodofluorescein
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)
(stimulating effect of xanthene dyes on Ig produced in vitro by rat spleen lymphocytes)

RN 2320-96-9 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dichloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)

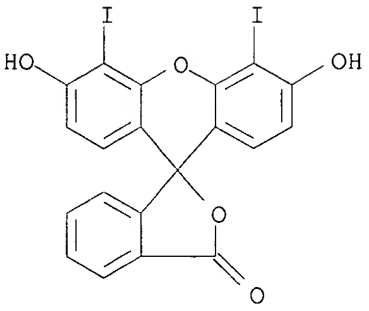



RN 4372-02-5 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dibromo-3',6'-dihydroxy-, disodium salt (9CI) (CA INDEX NAME)




●2 Na

RN 33239-19-9 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 3',6'-dihydroxy-4',5'-diiodo-, disodium salt (9CI) (CA INDEX NAME)

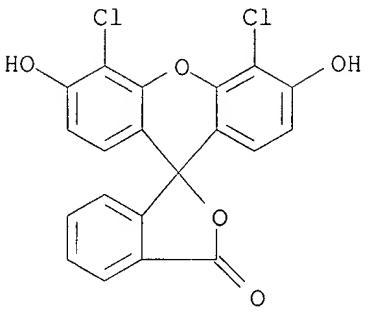


●2 Na

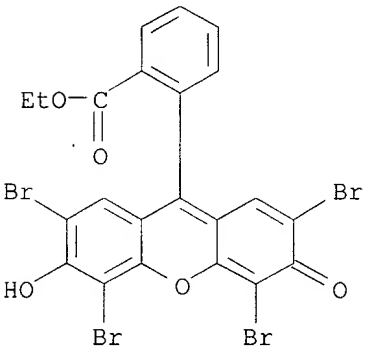
AB The effects of food additives on Ig produced in rat splenic lymphocytes were examined The xanthene dye, Rose Bengal, enhanced IgE production, while inhibiting the production of IgG and IgM, at 50 μM. Among the xanthene dyes, Rose Bengal having 4 iodine and 4 chlorine atoms exerted the highest Ig production-regulating activity in splenocytes, and dihalogenated fluorescein, a diiodo compound, exerted similar activity, while the dichloro and dibromo compds. did not. These results suggest that halogen atoms, especially the iodine atom, in xanthene dyes play an important role in regulation of Ig production

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L85 ANSWER 30 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1997:644101 HCAPLUS
DOCUMENT NUMBER: 127:326457
TITLE: Nucleotide regulation and characteristics of potassium channel opener binding to skeletal muscle membranes
AUTHOR(S): Dickinson, K. E. J.; Bryson, C. C.; Cohen, R. B.; Rogers, L.; Green, D. W.; Atwal, K. S.
CORPORATE SOURCE: Bristol-Myers Squibb Pharm. Res. Inst., Princeton, NJ, 08543, USA
SOURCE: Molecular Pharmacology (1997), 52(3), 473-481
CODEN: MOPMA3; ISSN: 0026-895X
PUBLISHER: Williams & Wilkins
DOCUMENT TYPE: Journal
LANGUAGE: English
IT **2320-96-9**, Dichlorofluorescein **6359-05-3**, Ethyleosin
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)
(potassium channel binding inhibition by; nucleotide regulation and characteristics of potassium channel opener binding to skeletal muscle membranes)
RN 2320-96-9 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dichloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



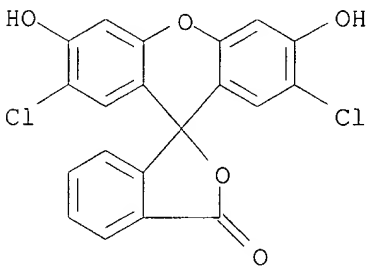

RN 6359-05-3 HCAPLUS
CN Benzoic acid, 2-(2,4,5,7-tetrabromo-6-hydroxy-3-oxo-3H-xanthen-9-yl)-, ethyl ester, potassium salt (9CI) (CA INDEX NAME)




● K

AB [3H]P1075 binding to membrane prepns. of rabbit skeletal muscle were observed in the presence of nucleotide triphosphates or diphosphates but not AMP, cAMP, adenosine, tripolyphosphate, or pyrophosphate. Nonhydrolyzable or poorly hydrolyzable ATP analogs inhibited MgATP-supported binding. The EC50 value for MgATP-supported binding (0.4 mM) was decreased .apprx.10-fold in the presence of an ATP-regenerating system, and significant metabolism by membrane nucleotidases was confirmed by high performance liquid chromatog. anal. [3H]P1075 bound to skeletal muscle with a Kd value of 37 ± 3 nM and a Bmax value of 280 ± 14 fmol/mg of protein. [3H]P1075 binding to subcellular fractions was highest in membranes enriched in T tubules. Specific binding was reversible, trypsin-sensitive, maximal at pH 8, and stereoselective for the (3S,4R)-enantiomer of cromakalim. Potassium channel openers exhibited a rank order of potency of P1075 > pinacidil > levcromakalim = BMS-180448 > nicorandil > diazoxide = BRL 38226. Fluorescein analogs (ethyleosin, phloxine B, and rose bengal) were relatively potent inhibitors of binding (Kj = 200-300 nM). The potassium channel openers cromakalim and BMS-180448 were competitive inhibitors of [3H]P1075 binding. In contrast, rose bengal and the ATP-regulated potassium channel antagonist glyburide increased the rate of [3H]P1075 dissociation in a manner consistent with noncompetitive interaction.

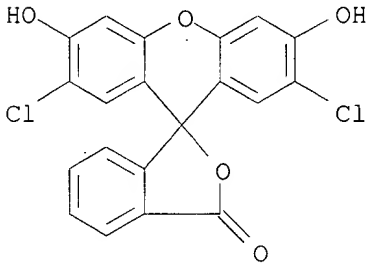
L85 ANSWER 31 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1997:90091 HCAPLUS
DOCUMENT NUMBER: 126:262947
TITLE: Alterations in intracellular reactive oxygen species generation and redox potential modulate mast cell function
AUTHOR(S): Wolfreys, Karen; Oliveira, David B. G.
CORPORATE SOURCE: School Clinical Medicine, Univ. Cambridge, Cambridge, UK
SOURCE: European Journal of Immunology (1997), 27(1), 297-306
CODEN: EJIMAF; ISSN: 0014-2980
PUBLISHER: VCH
DOCUMENT TYPE: Journal
LANGUAGE: English
IT **76-54-0**, 2',7'-Dichlorofluorescein
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)
(mast cell function altered by intracellular reactive oxygen species generation and redox potential)
RN 76-54-0 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 2',7'-dichloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)




AB The hypothesis was tested that HgCl2 influences mast cell function via an effect on intra-cellular reactive oxygen species (ROS) production/redox balance. Incubation with HgCl2, gold compds. or D-penicillamine (the latter only in the presence of copper ions) led to the intracellular production of ROS as shown by the oxidative production of the fluorescent compound 2',7'-dichlorofluorescein. Mast cells were more sensitive than splenocytes. Direct oxidative stress (exposure to H2O2) produced a similar sensitization for mediator release to that caused by HgCl2. Inhibition of ROS formation by desferrioxamine or catalase diminished the enhancement of IgE-mediated serotonin release caused by HgCl2, as did replenishment of intracellular glutathione. 2-Mercaptoethanol exacerbated the toxicity of HgCl2, perhaps due to the formation of a lipophilic complex that enhanced HgCl2 uptake. Blocking of glutathione synthesis increased the toxicity of HgCl2 but also abolished any sensitizing effect on mediator release. Thus, 3 main predictions of our hypothesis were supported. The compds. known to influence mast cell function lead to the generation of ROS within the mast cell. Direct oxidative stress causes sensitization for mediator release by the mast cell. Modulation of ROS production/redox balance within the mast cell modulates the effects of these compds. on mast cell function. The balance of oxidative/antioxidative influences may play an important role in the modulation of mast cell function, particularly in the context of chemical induced autoimmunity.

L85 ANSWER 32 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1996:193719 HCAPLUS
DOCUMENT NUMBER: 124:270398
TITLE: Pesticide and model drug release from carboxymethylcellulose microspheres
AUTHOR(S): Darari, R.; Hasirci, V.
CORPORATE SOURCE: Dep. Biol. Sci., Middle East Tech. Univ., Ankara, 06531, Turk.
SOURCE: Journal of Microencapsulation (1996), 13(1), 9-24
CODEN: JOMIEF; ISSN: 0265-2048
PUBLISHER: Taylor & Francis
DOCUMENT TYPE: Journal
LANGUAGE: English
IT **76-54-0**, 2',7'-Dichlorofluorescein
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(drug release from CM-cellulose microspheres)
RN 76-54-0 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 2',7'-dichloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)




AB Sodium CM-cellulose was insolubilized in the form of microspheres using aluminum chloride as the crosslinking agent. Depending on the preparation medium pH, the spherical product could either be a microsphere with an ionotropic interior or a microcapsule. Various microspheres with different crosslinker, biopolymer, and drug (2',7'-dichlorofluorescein and aldicarb) contents were prepared and their structures, properties, swelling behavior and release kinetics investigated. The release kinetics could not be described by typical Fickian or non-Fickian approaches.

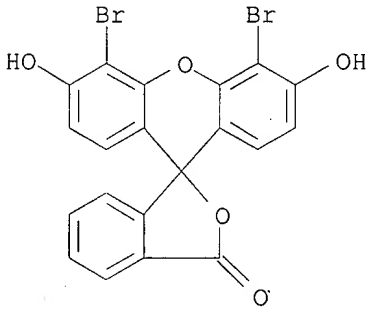
L85 ANSWER 33 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1995:563491 HCAPLUS
DOCUMENT NUMBER: 122:310255
TITLE: Axillary thermometer packaging
INVENTOR(S): Thackston, Thomas; Focarino, Gary
PATENT ASSIGNEE(S): Pymah Corporation, USA
SOURCE: U.S., 17 pp. Cont.-in-part of U.S. Ser. No. 992,919, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 5401100 | A | 19950328 | US 1994-210504 | 19940318 |

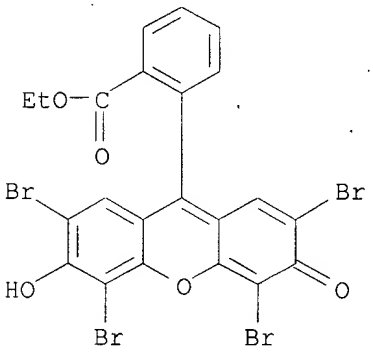
PRIORITY APPLN. INFO.: US 1992-992919 19921218
IT **596-03-2 6359-05-3**, Ethyleosin **33239-19-9**
RL: DEV (Device component use); **THU (Therapeutic use)**; BIOL

(Biological study); USES (Uses)
(axillary thermometer packaging)

RN 596-03-2 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dibromo-3',6'-dihydroxy- (9CI) (CA INDEX NAME)

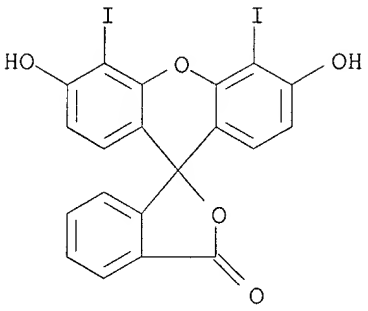



RN 6359-05-3 HCAPLUS
CN Benzoic acid, 2-(2,4,5,7-tetrabromo-6-hydroxy-3-oxo-3H-xanthen-9-yl)-, ethyl ester, potassium salt (9CI) (CA INDEX NAME)




● K

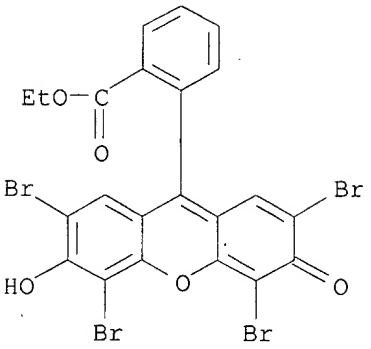
RN 33239-19-9 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 3',6'-dihydroxy-4',5'-diiodo-, disodium salt (9CI) (CA INDEX NAME)



●2 Na

AB A package for adapting a chemical thermometer to axillary use comprising a substrate coated with a release agent, a clin. chemical thermometer disposed on the substrate and a transparent overlayer film having a surface of the film coated with a pressure sensitive adhesive, the adhesive coated surface being in juxtaposition with the oral thermometer and the release agent coated surface of the substrate, thereby, adhering the thermometer to the overlayer film and sealing the thermometer within the package formed by the substrate and the overlayer film, the overlayer film being releasably adhered to the substrate.

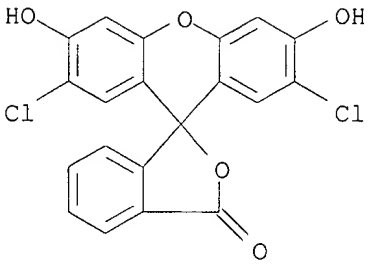
L85 ANSWER 34 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1995:287418 HCAPLUS
DOCUMENT NUMBER: 122:122873
TITLE: Interaction of fluorescein derivatives with glibenclamide binding sites in rat brain
AUTHOR(S): Holemans, Sophie; Feron, Olivier; Octave, Jean-Noeel; Maloteaux, Jean-Marie
CORPORATE SOURCE: Laboratoire de Neurochimie, Universite Catholique de Louvain, UCL 1352, Avenue Hippocrate, 10, Brussels, 1200, Belg.
SOURCE: Neuroscience Letters (1995), 183(3), 183-6
CODEN: NELED5; ISSN: 0304-3940
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
IT **6359-05-3**, Ethyleosin
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)
(interaction of fluorescein derivs. with glibenclamide binding sites in rat brain)
RN 6359-05-3 HCAPLUS
CN Benzoic acid, 2-(2,4,5,7-tetrabromo-6-hydroxy-3-oxo-3H-xanthen-9-yl)-, ethyl ester, potassium salt (9CI) (CA INDEX NAME)



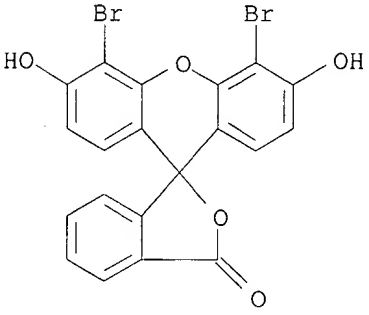
● K

AB In rat brain, [3H]glibenclamide binds with high affinity to sulfonylurea receptors associated with ATP-sensitive potassium (KATP) channels. KATP channels may play a modulatory role in neurotransmitter release and are involved in acute pathol. events occurring in the brain. Fluorescein derivs., which are suitable tools for the labeling of nucleotide binding sites, influence KATP channels and sulfonylurea receptors properties in insulinoma and cardiac cells. In this study, a neg. allosteric action of fluorescein derivs. on glibenclamide binding sites has been shown in rat cortical neurons. This supports the hypothesis of interactions between nucleotide- and sulfonylurea-binding sites within the sulfonylurea receptor.

L85 ANSWER 35 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1994:68857 HCAPLUS
DOCUMENT NUMBER: 120:68857
TITLE: Pattern recognition for the antitumor activity of some fluorescein derivatives
AUTHOR(S): Li, Bingrui; He, Fengying; Wang, Liufang
CORPORATE SOURCE: Dep. Chem., Lanzhou Univ., Lanzhou, 730000, Peop. Rep. China
SOURCE: Gaodeng Xuexiao Huaxue Xuebao (1993), 14(7), 954-6
CODEN: KTHPDM; ISSN: 0251-0790
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
IT **76-54-0 596-03-2**
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(antitumor activity of, structure in relation to)
RN 76-54-0 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 2',7'-dichloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



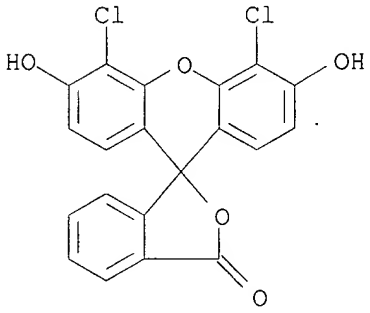
RN 596-03-2 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dibromo-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



AB In this paper, some antitumor fluorescein derivs. were classified according to their activity by using Non-Linear Mapping (NLM) pattern recognition techniques. Three sets of structural parameters, {ΣMR, F2, (Σπ)2}, {ΣMR, F2, π3} and {ΣMR, ΣF, (Σπ)2} were screened out. Three sets of structural parameters, {ΣMR, F2, (Σπ)2}, {ΣMR, F2, π3} and {ΣMR, ΣF, (Σπ)2} were screened out. The results showed that the main structural factors influencing the antitumor activity of these substances are their molar refraction, hydrophobicity and filed inductive effect, especially field inductive effect of 2-substituent, whereas conjugative effect is not. The results showed that the main structural factors influencing the antitumor activity of these substances are their molar refraction, hydrophobicity and field inductive effect, especially field inductive effect of 2-substituent, whereas conjugative effect is not. The forecast model about antitumor activity of the derivs. were established and further synthesis were suggested by this research. The forecast model about antitumor activity of the derivs. were established and further syntheses were suggested by this research.

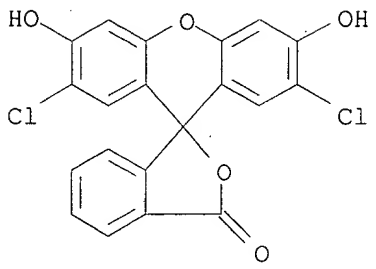
L85 ANSWER 36 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1981:401135 HCAPLUS
DOCUMENT NUMBER: 95:1135
TITLE: Inhibition of housefly oxidative detoxication by phthaleins, fluoresceins, and related compounds
AUTHOR(S): Jordan, T. W.; Smith, J. N.
CORPORATE SOURCE: Biochem. Dep., Victoria Univ., Wellington, N. Z.
SOURCE: Xenobiotica (1981), 11(1), 1-7
CODEN: XENOBH; ISSN: 0049-8254
DOCUMENT TYPE: Journal
LANGUAGE: English

IT **2320-96-9**
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)
(xenobiotic metabolism by housefly response to)
RN 2320-96-9 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dichloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)

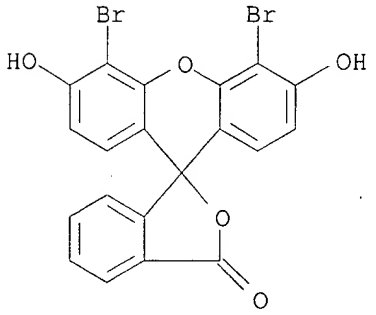



AB Phenolphthalein [77-09-8], halogenated fluoresceins, and other triphenylmethane and diphenylmethane derivs. inhibited biphenyl [92-52-4] hydroxylation, aldrin [309-00-2] epoxidn., and several O-dealkylations in housefly abdomen homogenates. Phenolphthalein and eosin [17372-87-1] (50 μM) were 2-3 times more effective than SKF 525A [62-68-0] and piperonyl butoxide [51-03-6] (50 μM) as inhibitors of biphenyl hydroxylation in vitro. Phthaleins, Aurin [603-45-2] and aluminon [569-58-4], inhibited both epoxidn. and hydroxylation to similar extents, but fluoresceins, Rhodamine B [81-88-9], Malachite Green [569-64-2], and basic diphenylmethane derivs., preferentially inhibited hydroxylation. Tetrabromophenolphthalein Et ester [1176-74-5] and bis-(N-dimethyl-4-amnophenyl)methane [101-61-1] inhibited biphenyl hydroxylation in vivo; the latter compound synergized the toxic effects of 1-naphthyl N-methylcarbamate in live houseflies.

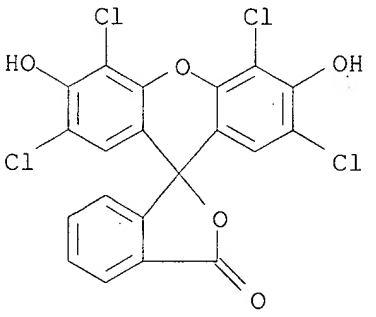
L85 ANSWER 37 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1973:487959 HCAPLUS
DOCUMENT NUMBER: 79:87959
TITLE: Inhibition of hemolysis by tricyclic dyes. Fluorescein-phenothiazine antagonism
AUTHOR(S): Baur, Ernst W.
CORPORATE SOURCE: Tacoma, WA, USA
SOURCE: Biochemical Pharmacology (1973), 22(12), 1509-16
CODEN: BCPCA6; ISSN: 0006-2952
DOCUMENT TYPE: Journal
LANGUAGE: English
IT **76-54-0 596-03-2 2320-38-9 2320-96-9 33239-19-9**
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)
(antihemolytic activity of)
RN 76-54-0 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 2',7'-dichloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



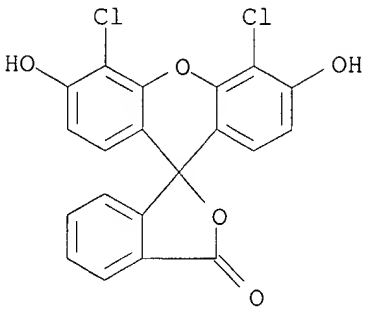
RN 596-03-2 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dibromo-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



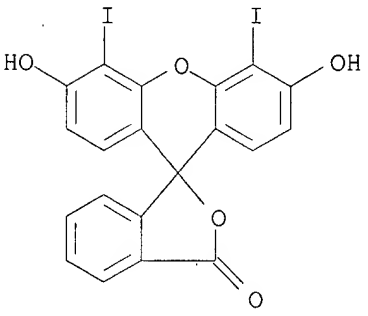
RN 2320-38-9 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 2',4',5',7'-tetrachloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



RN 2320-96-9 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 4',5'-dichloro-3',6'-dihydroxy- (9CI) (CA INDEX NAME)



RN 33239-19-9 HCAPLUS
CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, 3',6'-dihydroxy-4',5'-diiodo-, disodium salt (9CI) (CA INDEX NAME)



●2 Na

AB Fifteen of 25 dyes with a condensed 3-ring nucleus, including 10 fluorescein (I) [41935-48-2] derivs. (.sim.5 .tim. 10-4M), inhibited in vitro human red cell hemolysis induced by phenothiazines, such as chlorpromazine. Eosin B [548-24-3] was the most inhibitory, especially when added simultaneously with the hemolysin. Eosin B also reduced lysis of Hb SS erythrocytes and red cells from a patient with an idiopathic acquired hemolytic anemia. Unsubstituted fluorescein was ineffective. However halogenation and nitration of the ring nucleus increased hemolysis inhibition, whereas halogenation of the side chains or mercuration of the nucleus abolished inhibition. Thus, there may be a direct drug-antagonist dye interaction, which conveys membrane stability on both normal erythrocytes under stress and on spontaneously hemolytic, pathol. fragile erythrocytes.

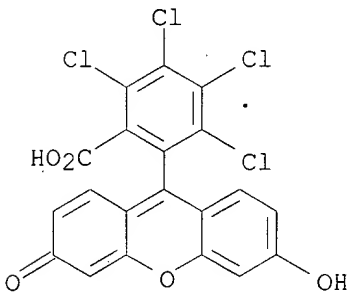
L85 ANSWER 38 OF 63 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1970:497465 HCAPLUS
DOCUMENT NUMBER: 73:97465
TITLE: Food additives and digestive enzymes. III. Food dyes and tryptic activity. 2
AUTHOR(S): Ito, Toshiyuki; Ikezawa, Hiroh; Tejima, Setsuzo
CORPORATE SOURCE: Nagoya City Univ., Nagoya, Japan
SOURCE: Eisei Kagaku (1970), 16(3), 134-7
CODEN: ESKGA2; ISSN: 0013-273X
DOCUMENT TYPE: Journal

LANGUAGE: Japanese

IT **13245-63-1**
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)
(trypsin-inhibiting activity of)

RN 13245-63-1 HCAPLUS

CN Fluorescein, 3,4,5,6-tetrachloro- (8CI) (CA INDEX NAME)




AB Xanthene dyes, including 1mM fluorescein, strongly inhibited tryptic digestion on N-benzoylarginine amide. The extent of inhibition was related to the number and position of the halogen on the structure. The Ki value was 4.7, 0.7, 0.4, 0.1 and 0.9mM for eosine, erythrosine, phloxine, rose bengal, and 3,4,5,6-tetrachlorofluorescein, resp.

=> d bib ab 39-41

L85 ANSWER 39 OF 63 MEDLINE on STN DUPLICATE 1
AN 96355742 MEDLINE
DN 96355742 PubMed ID: 8752107
TI Low glutathione and high iron govern the susceptibility of oligodendroglial precursors to oxidative stress.
AU Thorburne S K; Juurlink B H
CS Department of Anatomy and Cell Biology, University of Saskatchewan, Saskatoon, Canada.
SO JOURNAL OF NEUROCHEMISTRY, (1996 Sep) 67 (3) 1014-22.
Journal code: 2985190R. ISSN: 0022-3042.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199610
ED Entered STN: 19961015
Last Updated on STN: 19970203
Entered Medline: 19961002
AB We have previously shown, using qualitative approaches, that oligodendroglial precursors are more readily damaged by free radicals than are astrocytes. In the present investigation we quantified the oxidative stress experienced by the cells using oxidation of dichlorofluorescin diacetate to dichlorofluorescein as a measure of oxidative stress; furthermore, we have delineated the physiological bases of the difference in susceptibility to oxidative stress found between oligodendroglial precursors and astrocytes. We demonstrate that (a) oligodendroglial precursors under normal culture conditions are under six times as much oxidative stress as astrocytes, (b) oxidative stress experienced by oligodendroglial precursors increases sixfold when exposed to 140 mW/m2 of blue light, whereas astrocytic oxidative stress only doubles, (c)

astrocytes have a three times higher concentration of GSH than oligodendroglial precursors, (d) oligodendroglial precursors have > 20 times higher iron content than do astrocytes, and (e) oxidative stress in oligodendroglial precursors can be prevented either by chelating intracellular free iron or by raising intracellular GSH levels to astrocytic values. We conclude that GSH plays a central role in preventing free radical-mediated damage in glia.

L85 ANSWER 40 OF 63 MEDLINE on STN
AN 2003205901 MEDLINE
DN 22612365 PubMed ID: 12727198
TI Method to overcome photoreaction, a serious drawback to the use of dichlorofluorescin in evaluation of reactive oxygen species.
AU Afzal Muhammad; Matsugo Seiichi; Sasai Masaaki; Xu Baohui; Aoyama Kohji; Takeuchi Toru
CS Department of Environmental Medicine and Hygiene, Kagoshima University Faculty of Medicine, 8-35-1 Sakuragaoka, Kagoshima 890-8520, Japan.
SO BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (2003 May 16) 304 (4) 619-24.
Journal code: 0372516. ISSN: 0006-291X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200306
ED Entered STN: 20030503
Last Updated on STN: 20030627
Entered Medline: 20030626
AB Non-fluorescent dichlorofluorescin (DCFH) was converted to fluorescent products by photo-irradiation during observations with spectrofluorometer and fluorescence microscopy. Photo-irradiation of DCFH at 250, 300, 330, 400, 500, or 600 nm generated fluorescent dichlorofluorescein (DCF), an oxidation product of DCFH, and an unrecognized fluorescent product. The ratio of the unknown product to DCF varied from 0.15 to 8.21 depending on wavelength. Although reactive oxygen species scavengers, such as catalase, superoxide dismutase, and sodium azide, did not suppress the increase in non-specified fluorescence, reagents such as ascorbic acid, mercaptopropionyl glycine, and methoxycinnamic acid, in a cell-free system, almost completely suppressed it with little effect on the fluorescence of DCF. Meanwhile, ascorbic acid also suppressed non-specified fluorescence in cells, but not completely. At low concentrations of DCFH, the speed of increasing fluorescence was considerably retarded, to such a degree that the fluorescence increase in cells during fluorescence microscopic observation was negligible. The addition, at the time of evaluation, of the above reagents to cell-free systems and, in cell systems, reducing the concentration of DCFH, effectively suppressed the photoreaction of DCFH.

L85 ANSWER 41 OF 63 MEDLINE on STN
AN 1999428478 MEDLINE
DN 99428478 PubMed ID: 10497168
TI Phenoxyl free radical formation during the oxidation of the fluorescent dye 2',7'-dichlorofluorescein by horseradish peroxidase. Possible consequences for oxidative stress measurements.
AU Rota C; Fann Y C; Mason R P
CS Free Radical Metabolite Section, Laboratory of Pharmacology, NIEHS, National Institutes of Health, Research Triangle Park, North Carolina 27709, USA.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1999 Oct 1) 274 (40) 28161-8.
Journal code: 2985121R. ISSN: 0021-9258.

CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199911
ED Entered STN: 20000111
Last Updated on STN: 20000111
Entered Medline: 19991102
AB The oxidation of the fluorescent dye 2',7'-dichlorofluorescein (DCF) by horseradish peroxidase was investigated by optical absorption, electron spin resonance (ESR), and oxygen consumption measurements. Spectrophotometric measurements showed that DCF could be oxidized either by horseradish peroxidase-compound I or -compound II with the obligate generation of the DCF phenoxyl radical (DCF(.)). This one-electron oxidation was confirmed by ESR spin-trapping experiments. DCF(.) oxidizes GSH, generating the glutathione thiyl radical (GS(.)), which was detected by the ESR spin-trapping technique. In this case, oxygen was consumed by a sequence of reactions initiated by the GS(.) radical. Similarly, DCF(.) oxidized NADH, generating the NAD(.) radical that reduced oxygen to superoxide (O-(2)), which was also detected by the ESR spin-trapping technique. Superoxide dismutated to generate H(2)O(2), which reacted with horseradish peroxidase, setting up an enzymatic chain reaction leading to H(2)O(2) production and oxygen consumption. In contrast, when ascorbic acid reduced the DCF phenoxyl radical back to its parent molecule, it formed the unreactive ascorbate anion radical. Clearly, DCF catalytically stimulates the formation of reactive oxygen species in a manner that is dependent on and affected by various biochemical reducing agents. This study, together with our earlier studies, demonstrates that DCFH cannot be used conclusively to measure superoxide or hydrogen peroxide formation in cells undergoing oxidative stress.

=> d bib ab 42-46

L85 ANSWER 42 OF 63 EMBASE COPYRIGHT 2003 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
AN 2002374553 EMBASE
TI In vitro antibacterial activities of phloxine B and other halogenated fluoresceins against methicillin-resistant Staphylococcus aureus.
AU Rasooly A.; Weisz A.
CS A. Weisz, Office of Cosmetics and Colors, Ctr. for Food Safety/Applied Nutr., U.S. Food and Drug Administration, 200 C St., S.W., Washington, DC 20204, United States. aweisz@cfsan.fda.gov
SO Antimicrobial Agents and Chemotherapy, (2002) 46/11 (3650-3653).
Refs: 22
ISSN: 0066-4804 CODEN: AMACCQ
CY United States
DT Journal; Article
FS 004 Microbiology
037 Drug Literature Index
LA English
SL English
AB Fluorescein dyes in which the benzoic acid moiety has been tetrachlorinated (50 to 100 μg/ml) inhibit in vitro Staphylococcus aureus growth (MIC, 25 μg/ml). Specifically, under standard room illumination, phloxine B at a concentration of 100 μg/ml killed 99% of the cultures (mid-log phase). It also reduced S. aureus CFU by 10(4). Structure-activity analysis revealed that the activity against S. aureus increases with the increase in the number of the substituting halogens in the hydroxyxanthene moiety.

L85 ANSWER 43 OF 63 EMBASE COPYRIGHT 2003 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
AN 2001318195 EMBASE
TI Aberrant redox regulation in human metastatic melanoma cells compared to normal melanocytes.
AU Meyskens F.L. Jr.; McNulty S.E.; Buckmeier J.A.; Tohidian N.B.; Spillane T.J.; Kahlon R.S.; Gonzalez R.I.
CS Dr. F.L. Meyskens Jr., University of California, College of Medicine, Chao Family Compreh. Cancer Center, 101 The City Drive South, Orange, CA 92868, United States. flmeyske@uci.edu
SO Free Radical Biology and Medicine, (15 Sep 2001) 31/6 (799-808). Refs: 44
ISSN: 0891-5849 CODEN: FRBMEH
PUI S 0891-5849(01)00650-5
CY United States
DT Journal; Article
FS 013 Dermatology and Venereology
016 Cancer
030 Pharmacology
037 Drug Literature Index
052 Toxicology
LA English
SL English
AB Melanocytes and melanoma cells contain melanin, a complex polymer that modulates redox changes in these cells. Relative intracellular hydrogen peroxide levels measured by dichlorodihydrofluorescein are similar in the two cell types, but the levels of superoxide anion measured by dihydroethidium were markedly increased in melanoma cells. Chelator-induced oxidative stress is efficiently suppressed by melanocytes without substantial recruitment of the transcription factors NF-κB and AP-1 as measured by electrophoretic mobility shift assay and quantitated by densitometry or by a change in frequency of apoptosis as determined by annexin V binding. In contrast, NF-κB in melanoma cells is strongly recruited by changes in redox status and exhibits a correlative relationship to intracellular hydrogen peroxide (but not superoxide anion). However, the response of the NF-κB pathway to intracellular hydrogen peroxide is anomalous, including downregulation of p65 and IκBα RNA expression (Northern blot). Additionally, recruitment of AP-1 binding in melanoma cells was directly correlated with intracellular levels of superoxide anion (but not hydrogen peroxide). Neither the degree of NF-κB nor AP-1 binding in melanoma cells was related to the frequency of apoptosis. The responsiveness of NF-κB and AP-1 recruitment to intracellular levels of hydrogen peroxide and superoxide anion without concomitant control of apoptosis provides a general mechanism by which these cells can escape noxious injury (e.g., chemotherapy). The marked enhancement of apoptosis in melanoma cells by chelators indicates, however, that this alteration can be circumvented and offers a unique therapeutic window to explore. .COPYRGT. 2001 Elsevier Science Inc.

L85 ANSWER 44 OF 63 EMBASE COPYRIGHT 2003 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
AN 2001400157 EMBASE
TI Role of reactive oxygen intermediates in Japanese encephalitis virus infection in murine neuroblastoma cells.
AU Raung S.-L.; Kuo M.-D.; Wang Y.-M.; Chen C.-J.
CS C.-J. Chen, Department of Education and Research, Taichung Veterans General Hospital, Taichung 407, Taiwan,Province of China. cjchen@vghtc.vghtc.gov.tw

SO Neuroscience Letters, (23 Nov 2001) 315/1-2 (9-12).
Refs: 20
ISSN: 0304-3940 CODEN: NELED5
PUI S 0304-3940(01)02300-X
CY Ireland
DT Journal; Article
FS 004 Microbiology
008 Neurology and Neurosurgery
029 Clinical Biochemistry
037 Drug Literature Index
LA English
SL English
AB Infection with Japanese encephalitis virus (JEV), a mosquito-borne, neurotropic flavivirus, may cause acute encephalitis in humans and induce severe cytopathic effects in various types of cultured cells. This study attempted to determine whether JEV infection induces free radical generation and whether oxidative stress contributes to virus-induced cell death in neuroblastoma cells. A rise in the intracellular level of free radicals indicated by the 2',7'-dichlorofluorescein fluorescence was observed in N18 cells following JEV infection. Cellular flavon-containing enzymes were involved in JEV-induced fluorescent change. Cells were moderately protected from JEV-induced death by diphenyleneiodonium, a flavon-containing enzyme inhibitor, whereas common antioxidants such as N-acetylcysteine, pyrrolidine dithiocarbamate, Tiron, and Trolox turned out to be ineffective. These results suggest that the direct antioxidant action is not helpful in prevention of JEV-induced neuronal cell death. 

L85 ANSWER 45 OF 63 EMBASE 
on STN
AN 94031193 EMBASE
DN 1994031193
TI Myricetin and quercetin, the flavonoid constituents of Ginkgo biloba extract, greatly reduce oxidative metabolism in both resting and Ca2+-loaded brain neurons.
AU Oyama Y.; Fuchs P.A.; Katayama N.; Noda K.
CS Lab. Cell Signalling [Pharmacology], Faculty Integrated Arts and Sciences, The University of Tokushima,Tokushima 770, Japan
SO Brain Research, (1994) 635/1-2 (125-129).
ISSN: 0006-8993 CODEN: BRREAP
CY Netherlands
DT Journal; Article
FS 002 Physiology
037 Drug Literature Index
LA English
SL English
AB The antioxidant action of myricetin and quercetin, the flavonoid constituents of the extract of Ginkgo biloba (EGb), on oxidative metabolism of brain neurons dissociated from the rats was examined using 2',7'-dichlorofluorescin (DCFH) which is retained within the neuron and then is oxidized by cellular hydrogen peroxide to be highly fluorescent. Incubation with myricetin or quercetin reduced the oxidation of DCFH in resting brain neurons, more profoundly than EGb. Myricetin decreased the oxidative metabolism at concentrations of 3 nM or more. It was 10 nM or more for the case of quercetin. Incubation with each flavonoid constituent also reduced the Ca2+-induced increase in the oxidative metbolism without affecting the cellular content of DCFH or the intracellular concentrations of Ca2+. Such an antioxidant action of myricetin or quercetin may be responsible for a part of the beneficial effects of EGb on brain neurons subject to ischemia.

L85 ANSWER 46 OF 63 EMBASE COPYRIGHT 2003 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
AN 94031191 EMBASE
DN 1994031191
TI Characterization of 2',7'-dichlorofluorescin fluorescence in dissociated mammalian brain neurons: Estimation on intracellular content of hydrogen peroxide.
AU Oyama Y.; Hayashi A.; Ueha T.; Maekawa K.
CS Lab. Cell Signaling (Pharmacol. Sci), Faculty Integrated ARts and Sciences, The University of Tokushima,Tokushima, Japan
SO Brain Research, (1994) 635/1-2 (113-117).
ISSN: 0006-8993 CODEN: BRREAP
CY Netherlands
DT Journal; Article
FS 002 Physiology
029 Clinical Biochemistry
037 Drug Literature Index
LA English
SL English
AB The fluorescence of 2',7'-dichlorofluorescin (DCF) was measured in acutely dissociated rat cerebellar neurons as a mean of estimating the formation of reactie oxygen species (ROS). N,N-Diethyldithiocarbamate, an inhibitor for superoxide dismutase, reduced the intensity of DCF fluorescence in a dose-dependent fashion at concentrations of 30 nM to up to 10 μM. N-Ethylmaleimide, an inhibitor for glutathione peroxidase, augmented the ECF fluorescence in a dose-dependent manner at concentration of 10 μM to 1 mM while 3-amino-1,2,4-triazole, an inhibitor for catalase, did not change the fluorescence intensity even at concentrations as high as 1 mM. Hydrogen peroxide, applied externally at concentrations between 3 μM and 3 mM, augmented the fluorescence in a dose-dependent fashion. These results suggest the possibility that the DCF fluorescence may be useful in estimating the intracellular content of hydrogen peroxide of mammalian brain neurons.

=> d bib ab 47-63

L85 ANSWER 47 OF 63 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 2003:376475 BIOSIS
DN PREV200300376475
TI Benzo(a)pyrene diones are produced by photochemical and enzymatic oxidation and induce concentration-dependent decreases in the proliferative state of human pulmonary epithelial cells.
AU Reed, Matthew D. [Reprint Author]; Monske, Michael L.; Lauer, Fredine T.; Meserole, Stephen P.; Born, Jerry L.; Burchiel, Scott W.
CS Lovelace Respiratory Research Institute, 2425 Ridgecrest Dr. SE, Albuquerque, NM, 87108, USA
mreed@lrri.org
SO Journal of Toxicology and Environmental Health Part A, (July 11, 2003) Vol. 66, No. 13, pp. 1189-1205. print.
ISSN: 1528-7394 (ISSN print).
DT Article
LA English
ED Entered STN: 13 Aug 2003
Last Updated on STN: 18 Sep 2003
AB Organic components within mixtures of combustion-derived materials may play an important role in the correlation between air pollution and adverse cardio/respiratory health. One class of these organic components, polycyclic aromatic hydrocarbons (PAHs), has been shown to produce a wide

variety of adverse health effects. An air toxic and a model PAH, benzo(a)pyrene (BaP), is a component of combustion-derived particulate matter (PM). Although most biological effects associated with BaP have been attributed to the cytochrome P-450-derived BaP 7,8-diol 9,10-epoxide, many other BaP oxidation products are formed in atmospheric and biological reactions and may contribute to PAH-induced adverse health effects. In an ambient environment, BaP and other PAHs undergo oxidation in the presence of ultraviolet **light**, O2, O3, NO2, or OH.. Biological peroxidase- and P-450-mediated conversion of BaP produces an extensive metabolic profile of BaP oxidation products that significantly outnumber the 7,8-diol/diol epoxide. The data herein show that in addition to near-ultraviolet **light** and P-450 isozymes, lactoperoxidase (airway peroxidase) converted BaP into a mixture of three diones, the 1,6-, 3,6-, and 6,12-BaP dione (BPD). In addition, it was found that low concentrations of BPDs induced a concentration-dependent decrease in the proliferation state of human pulmonary epithelial cells in vitro. Nanomolar concentrations of BPDs mediated cell growth inhibition, which was partially reversed by co-incubation with N-acetyl-L-cysteine and ascorbate. BPDs induced the formation of reactive oxygen species as measured by the fluorophore 2,7-dichlorofluorescein. Together, these results may indicate a role for PAH oxidation products (PAH diones) in the adverse health effects associated with combustion-derived PM and semivolatile organic compounds.

L85 ANSWER 48 OF 63 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 2002:561472 BIOSIS
DN PREV200200561472
TI Photosensitized oxidation of 2',7'-dichlorofluorescin: Singlet oxygen does not contribute to the formation of fluorescent oxidation product 2',7'-dichlorofluorescein.
AU Bilski, P. [Reprint author]; Belanger, A. G.; Chignell, C. F.
CS NIEHS, Laboratory of Pharmacology and Chemistry, NIH, 111 TW Alexander Drive, Research Triangle Park, NC, 27709, USA
Bilski@niehs.nih.gov
SO Free Radical Biology and Medicine, (October 1, 2002) Vol. 33, No. 7, pp. 938-946. print.
CODEN: FRBMEH. ISSN: 0891-5849.
DT Article
LA English
ED Entered STN: 30 Oct 2002
Last Updated on STN: 30 Oct 2002
AB 2',7'-Dichlorofluorescin (DCFH) is often employed to assess oxidative stress in cells by monitoring the appearance of 2',7'-dichlorofluorescein (DCF), its highly fluorescent oxidation product. We have investigated the photosensitized oxidation of DCFH in solution and elucidated the role played by singlet molecular oxygen (1O2) in this reaction. We used rose bengal (RB), protoporphyrin, and DCF as photosensitizers. Irradiation (550 nm) of RB (20 muM) in 50 mM phosphate (pH 7.4) in the presence of DCFH (50 muM) resulted in the rapid formation of DCF, measured as an increase in its characteristic absorbance and fluorescence. The oxidation rate was faster in deoxygenated solution, did not increase in D2O, and even increased in the presence of sodium azide. The presence of antioxidants that react with 1O2, thus removing oxygen, accelerated DCF formation. Such results eliminate any potential direct involvement of 1O2 in DCF formation, even though DCFH is an efficient (physical) quencher of 1O2 (kq = 1.4 X 108 M-1 s-1 in methanol). DCF is also a moderate photosensitizer of 1O2 with a quantum yield of circa phi = 0.06 in D2O and phi = 0.08 in propylene carbonate, which unequivocally indicates that DCF can exist in a triplet state upon excitation with UV and visible **light**. This triplet can initiate photo-oxidization of DCFH via

redox-and-radical mechanism(s) similar to those involving RB (vide supra). Our results show that, upon illumination, DCF can function as a moderate photosensitizer initiating DCFH oxidation, which may prime and accelerate the formation of DCF. We have also shown that, while 1O2 does not contribute directly to DCF production, it can do so indirectly via reaction with cellular substrates yielding peroxy products and peroxyl radicals, which are able to oxidize DCFH in subsequent dark reactions. These findings suggest that DCFH should not be regarded as a probe sensitive to singlet molecular oxygen, and that care must be taken when using DCFH to measure oxidative stress in cells as a result of both visible and UV **light** exposure.

L85 ANSWER 49 OF 63 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 2003:45675 BIOSIS
DN PREV200300045675
TI (Correction of Previews 200200561708. Apoptotic response to **photodynamic therapy** versus the Bcl-2 antagonist HA14-1. Correction of author names.).
AU Kessel, David [Reprint Author]; Castelli, Michelle; Reiners, John J. Jr.
CS Department of Pharmacology, Wayne State University School of Medicine, Detroit, MI, 48201, USA
dhkessel@med.wayne.edu
SO Photochemistry and Photobiology, (November 2002) Vol. 76, No. 5, pp. 560. print.
ISSN: 0031-8655 (ISSN print).
DT Article
Errata
LA English
ED Entered STN: 15 Jan 2003
Last Updated on STN: 15 Jan 2003
AB In our paper (Photochemistry and Photobiology, 2002, 76(3): 314-319), Michelle Castelli was mistakenly omitted from the author list. We regret this error.

L85 ANSWER 50 OF 63 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 2002:561708 BIOSIS
DN PREV200200561708
TI Apoptotic response to **photodynamic therapy** versus the Bcl-2 antagonist HA14-1.
AU Kessel, David [Reprint author]; Reiners, John J., Jr.
CS Department of Pharmacology, Wayne State University School of Medicine, Detroit, MI, 48201, USA
dhkessel@med.wayne.edu
SO Photochemistry and Photobiology, (September, 2002) Vol. 76, No. 3, pp. 314-319. print.
CODEN: PHCBAP. ISSN: 0031-8655.
DT Article
LA English
ED Entered STN: 30 Oct 2002
Last Updated on STN: 30 Oct 2002
AB In this study, murine leukemia L1210 cells were used to compare the effects of **photodynamic therapy** (PDT) with those of the apoptotic nonpeptidic Bcl-2 ligand ethyl 2-amino-6-bromo-4-(1-cyano-2-ethoxy-2-oxoethyl)-4H-chromene-3-carboxylate (HA14-1). The photosensitizing agent capronyloxy-tetrakis methyloxyethyl porphycene (CPO) was selected from a group of sensitizers previously shown to target the antiapoptotic protein Bcl-2 for photodamage. Like PDT with CPO, HA14-1 caused the rapid activation of procaspase-3, followed by the appearance of an apoptotic morphology within 60 min. Caspase activation after a sublethal dose of either PDT or HA14-1 was enhanced by

staurosporine or the bile acid ursodeoxycholic acid. Moreover, PDT promoted procaspase activation and lethality of HA14-1 and vice versa. Effects of PDT versus HA14-1 could not be distinguished on the basis of the reactive oxygen species formation. Both caused the rapid oxidation of 2',7'-dichlorofluorescein. These results are consistent with the hypothesis that Bcl-2 photodamage is a target for some photosensitizing agents.

L85 ANSWER 51 OF 63 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 2003:86572 BIOSIS
DN PREV200300086572
TI Photochromic and fluorescent enhancing properties of synthesized silver nanoparticles.
AU Lee, G. P. [Reprint Author]; Lee, M. R.; Englund, B. E.; Stolzberg, R. J.
CS Department of Chemistry and Biochemistry and Center for Nanosensor Technology, University of Alaska Fairbanks, Fairbanks, AK, 99775, USA glee_uaa@hotmail.com; ffmrl@uaf.edu; bryolio@hotmail.com; ffrjs@uaf.edu
SO Arctic Science Conference Abstracts, (2002) Vol. 53, pp. 139. print. Meeting Info.: 53rd Arctic Science Conference. Fairbanks, Alaska, USA. September 18-21, 2002.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 6 Feb 2003
Last Updated on STN: 6 Feb 2003

L85 ANSWER 52 OF 63 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 2002:398759 BIOSIS
DN PREV200200398759
TI Indirect detection of photosensitizer ex vivo.
AU Bourre, Ludovic; Thibaut, Sonia; Briffaud, Amelie; Rousset, Nathalie; Eleouet, Sabine; Lajat, Youenn; Patrice, Thierry [Reprint author]
CS Laboratoire de Photobiologie des Cancers, Departement Laser, Hopital Laennec, 44093, Nantes cedex, 01, France patrice.laserdpt@wanadoo.fr
SO Journal of Photochemistry and Photobiology B Biology, (May, 2002) Vol. 67, No. 1, pp. 23-31. print.
CODEN: JPPBEG. ISSN: 1011-1344.
DT Article
LA English
ED Entered STN: 24 Jul 2002
Last Updated on STN: 24 Jul 2002
AB **Photodynamic therapy** induces the production of reactive oxygen species (ROS) within tissues exposed to laser **light** after administration of a sensitizer. In the context of continuing clinical and commercial development of chemicals with sensitizing properties, a minimally invasive assay is needed to determine the tissue kinetics of fluorescent or non-fluorescent photoreactive drugs. The level of ROS was determined ex vivo from 1 mm3 biopsy samples using 2'-7' dichlorofluorescin diacetate (DCFH-DA), a fluorescent probe which was converted into highly fluorescent dichlorofluorescin (DCF) in the presence of ROS. This assay was tested on meta(tetrahydroxyphenyl)chlorin (m-THPC, FOSCAN(R)), a powerful and fluorescent sensitizer, and bacteriochlorophyll derivative WST09 (TOOKAD(R)), a near-infrared absorbing sensitizer that is only slightly fluorescent. In conjunction with the ROS assay, the tissue accumulation of m-THPC was determined on biopsy samples using an optic fibre spectrofluorometer (OFS). DCF fluorescence was proportional to the level of oxidation induced by horseradish peroxidase used as a control and to the concentration (range: 0-5 mug ml-1) of both selected photosensitizers irradiated in a tube

together with DCFH. Regardless of the organ studied, an excellent correlation was found between fluorescence measurement by OFS and ROS determination for m-THPC (2 mg kg-1 iv) accumulation in tumour tissues was best after 48 h, and the best signal was obtained in liver. With non-fluorescent WST09 (2 mg kg-1), ROS determination showed the best tumour uptake 48 h after injection, with a tumour/muscle ratio of 5.4. The ROS assay appears to be feasible for determining sensitizer concentration in regular grip biopsy tissue samples.

L85 ANSWER 53 OF 63 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 2003:335780 BIOSIS
DN PREV200300335780
TI Involvement of Reactive Oxygen Species in Apoptosis during Development of Normal and Thalassemic Erythroid Precursors.
AU Fibach, Eitan [Reprint Author]; Goldfarb, Ada [Reprint Author]; Rachmilewitz, Eliezer A. [Reprint Author]; Amer, Johnny [Reprint Author]
CS Dept. of Hematology, Hadassah University Hospital, Jerusalem, Israel
SO Blood, (November 16, 2002) Vol. 100, No. 11, pp. Abstract No. 1180. print. Meeting Info.: 44th Annual Meeting of the American Society of Hematology. Philadelphia, PA, USA. December 06-10, 2002. American Society of Hematology.
CODEN: BLOOAW. ISSN: 0006-4971.
DT Conference; (Meeting)
Conference; (Meeting Poster)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 23 Jul 2003
Last Updated on STN: 22 Aug 2003
AB Reactive Oxygen Species (ROS), produced as by-product of metabolism, can oxidize various cellular components leading to cell damage. In sickle cell anemia and thalassemia (thal), although the basic lesion is in the globin genes, the pathology involves cell damage due to membrane changes mediated by ROS. Cell damage occurs both in the marrow (ineffective erythropoiesis due to apoptosis of early precursors) and in the peripheral blood (hemolysis of mature RBC). We have previously showed that mature RBC of beta-thal patients have higher capacity to generate ROS compared to normal RBC (Amer et al, Blood 98:12A, 2001). In the present report we studied the role of ROS in apoptosis during development of normal and thal erythroid cells and analyzed the modifying effects of different experimental conditions and drugs. Peripheral blood progenitors were grown according to the two-phase liquid culture protocol: Following addition of erythropoietin in the second phase of the culture, erythroid progenitors matured within 12 days into hemoglobin (Hb)-containing orthochromatic normoblasts. On different days, the cells were analyzed by flow cytometry: Maturation was followed by measuring cell size (forward **light** scatter), and Hb content and glycophorin A (GPA) surface expression using specific antibodies. We also measured binding of annexin V to outer surface phosphatidylserine (PS) which is known to be elevated following induction of apoptosis. ROS generation was measured by the appearance of fluorescence following incubation with 2'-7'-dichlorofluorescin. This compound enters the cells and become fluorescent upon oxidation. Exposure to H2O2 (2 mM) elevated (7-10 fold) this fluorescence, while the antioxidant N-acetyl-cysteine reduced it, confirming that oxidation of dichlorofluorescin depends on ROS. PS showed a similar pattern; it was dramatically increased by H2O2 (from 0.2% to 90% positive cells) and decreased by N-acetyl-cysteine. ROS generation was next examined in relation to cell maturation. Since cells obtained from different donors develop in culture at different rates, dual staining of ROS and GPA was used. The intensity of GPA increased with maturation, in correlation with the time in culture, and changes in cell size and in Hb

content. A reverse relationship was found when ROS was plotted vs. GPA intensity, indicating that ROS generation decreased as cells mature. In addition, ROS and PS could be modulated by the iron content of the cultures: Hemin, added to the cultures as heme chloride or heme arginate, or iron-saturated transferrin increased ROS and PS. This effect was inhibited by the cell permeable iron chelator L1. Hb denaturation by phenylhydrazine also increased ROS and PS. Comparing normal and beta-thal precursors under culture conditions of equal iron content showed higher ROS and PS in thal cells, especially at late stages of maturation. These results indicated that ROS generation decreases with erythroid maturation, but it is also influenced by factors such as iron overload and Hb instability. Thal precursors, compared to normal precursors at the same developmental stage, have increased ROS generation as well as externalization of PS, suggesting that thal cells are under high oxidative stress that causes membrane damage, demonstrated by PS externalization as a marker of apoptosis. This system provides a useful model for studying the mechanisms involved in ineffective erythropoiesis and for testing the efficacy of anti-oxidants in inhibiting the process.

L85 ANSWER 54 OF 63 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 2001:315407 BIOSIS
DN PREV200100315407
TI Release of reactive oxygen intermediates (superoxide radicals, hydrogen peroxide, and hydroxyl radicals) and peroxidase in germinating radish seeds controlled by **light**, gibberellin, and abscisic acid.
AU Schopfer, Peter [Reprint author]; Plachy, Claudia; Frahry, Gitta
CS Institut fuer Biologie II der Universitaet, Schaenzlestrasse 1, D-79104, Freiburg, Germany
schopfer@uni-freiburg.de
SO Plant Physiology (Rockville), (April, 2001) Vol. 125, No. 4, pp. 1591-1602. print.
CODEN: PLPHAY. ISSN: 0032-0889.
DT Article
LA English
ED Entered STN: 4 Jul 2001
Last Updated on STN: 19 Feb 2002
AB Germination of radish (Raphanus sativus cv Eterna) seeds can be inhibited by far-red **light** (high-irradiance reaction of phytochrome) or abscisic acid (ABA). Gibberellic acid (GA3) restores full germination under far-red **light**. This experimental system was used to investigate the release of reactive oxygen intermediates (ROI) by seed coats and embryos during germination, utilizing the apoplastic oxidation of 2',7'-dichlorofluorescin to fluorescent 2',7'-dichlorofluorescein as an in vivo assay. Germination in darkness is accompanied by a steep rise in ROI release originating from the seed coat (living aleurone layer) as well as the embryo. At the same time as the inhibition of germination, far-red **light** and ABA inhibit ROI release in both seed parts and GA3 reverses this inhibition when initiating germination under far-red **light**. During the later stage of germination the seed coat also releases peroxidase with a time course affected by far-red **light** , ABA, and GA3. The participation of superoxide radicals, hydrogen peroxide, and hydroxyl radicals in ROI metabolism was demonstrated with specific in vivo assays. ROI production by germinating seeds represents an active, developmentally controlled physiological function, presumably for protecting the emerging seedling against attack by pathogens.

L85 ANSWER 55 OF 63 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 2001:378155 BIOSIS
DN PREV200100378155
TI Flow cytometric evaluation of canine bone marrow differential cell counts.

AU Weiss, Douglas J. [Reprint author]; Blauvelt, Melissa; Sykes, Jane; McClenahan, David
CS Department of Veterinary PathoBiology, University of Minnesota, 1971 Commonwealth Ave, Saint Paul, MN, 55108, USA
weiss005@maroon.tc.umn.edu
SO Veterinary Clinical Pathology, (2000) Vol. 29, No. 3, pp. 97-104. print.
ISSN: 0275-6382.
DT Article
LA English
ED Entered STN: 8 Aug 2001
Last Updated on STN: 19 Feb 2002
AB Three flow cytometric techniques were evaluated for determination of differential cell counts on canine clinical bone marrow specimens. Techniques included staining bone marrow specimens with 2'7'-dichlorofluorescein (DCF) or 3,3'-dihexyloxacarbocyanine iodide (DiOC6) and evaluation of forward-angle **light** scatter vs. side-angle **light** scatter plots. Flow cytometric evaluation of bone marrow cells stained with DCF failed to separate bone marrow cells into distinct cell populations. Staining with DiOC6 resulted in separation of bone marrow cells into populations of mature and immature erythroid cells, mature and immature myeloid cells, and lymphocytes. The scatter plot method resulted in identification of mature and immature erythroid cells, immature myeloid cells, metamyelocytes, and bands and segmenters. Lymphocytes could not be differentiated from mature erythroid cells by the scatter plot method. When the results of the DiOC6 method and the scatter plot method were compared with manual bone marrow differential cell counts, the scatter plot method had more similar mean values and higher correlation coefficients. The scatter plot method has the potential of providing rapid semiquantitative assessment of bone marrow differential cell counts in dogs for specimens that contain low numbers of lymphocytes.

L85 ANSWER 56 OF 63 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1999:56079 BIOSIS
DN PREV199900056079
TI Photoreduction of the fluorescent dye 2'-7'-dichlorofluorescein: A spin trapping and direct electron spin resonance study with implications for oxidative stress measurements.
AU Marchesi, Emanuela; Rota, Cristina [Reprint author]; Fann, Yang C.; Chignella, Colin F.; Mason, Ronald P.
CS NIH/NIEHS, MD F0-02, P.O. Box 12233, Reseach Triangle Park, NC 27709, USA
SO Free Radical Biology and Medicine, (Jan., 1999) Vol. 26, No. 1-2, pp. 148-161. print.
CODEN: FRBMEH. ISSN: 0891-5849.
DT Article
LA English
ED Entered STN: 16 Feb 1999
Last Updated on STN: 16 Feb 1999
AB The photoreduction of 2'-7'-dichlorofluorescein (DCF) was investigated in buffer solution using direct electron spin resonance (ESR) and the ESR spin-trapping technique. Anaerobic studies of the reaction of DCF in the presence of reducing agents demonstrated that during visible irradiation (lambda > 300 nm) 2'-7'-dichlorofluorescein undergoes one-electron reduction to produce a semiquinone-type free radical as demonstrated by direct ESR. Spintrapping studies of incubations containing DCF, 5,5-dimethyl-1-pyrroline N-oxide (DMPO) and either reduced glutathione (GSH) or reduced NADH demonstrate, under irradiation with visible **light**, the production of the superoxide dismutase-sensitive DMPO/.OOH adduct. In the absence of DMPO, measurements with a Clark-type oxygen electrode show that molecular oxygen is consumed in a **light**

-dependent process. The semiquinone radical of DCF, when formed in an aerobic system, is immediately oxidized by oxygen, which regenerates the dye and forms superoxide.

L85 ANSWER 57 OF 63 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1999:253040 BIOSIS
DN PREV199900253040
TI Different densities of human eosinophils respond differently to PAF and IL-5.
AU Tsai, Jaw-Ji [Reprint author]; Wang, Ting-Fang
CS Section of Allergy and Immunology, Cathay General Hospital-Taipei, 280 Section 4, Jen-Ai Road, Taipei, Taiwan, China
SO Journal of Microbiology Immunology and Infection, (March, 1999) Vol. 32, No. 1, pp. 21-25. print.
DT Article
LA English
ED Entered STN: 2 Jul 1999
Last Updated on STN: 2 Jul 1999
AB Human eosinophils are heterogeneous, consisting of both normal and **light** density cells which may differ in their functional properties. In this study, we compared different densities of eosinophils in response to PAF and IL-5. The eosinophil activation markers were identified either by staining with monoclonal antibody EG2 or, by respiratory burst activity with dichrofluorescin diacetate (DCFH-DA). Both functions were analysed by flow cytometric analyzer. Results showed that **light** density eosinophils stained with a higher percentage of EG2 (EG2/Kimura stain) in comparison with normal density eosinophils (88.5 +- 19.1% vs. 43.9 +- 18.5% p <0.01). When both groups of cells were analysed with the respiratory burst activity, on EG2+ cells, the activity in **light** density EG2+ cells were much higher than that of normal density EG2+ cells. These activities in both groups of cells can be further enchanced by PAF and IL-5. Furthermore, the **light** density EG2+ cells were more eligible to PAF and IL-5 stimulation than were normal density EG2+ cells. In conclusion, normal density and **light** density eosinophils had different respiratory burst activities; both groups of EG2+eosinophils responded differently to PAF and IL-5.

L85 ANSWER 58 OF 63 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1997:444737 BIOSIS
DN PREV199799743940
TI In vivo measurement of active oxygen production in the brown alga Fucus evanescens using 2',7'-dichlorohydrofluorescein diacetate.
AU Collen, Jonas [Reprint author]; Davison, Ian R.
CS Sch. Mar. Sci., Univ. Maine, Orono, ME 04469-5722, USA
SO Journal of Phycology, (1997) Vol. 33, No. 4, pp. 643-648.
CODEN: JPYLAJ. ISSN: 0022-3646.
DT Article
LA English
ED Entered STN: 8 Oct 1997
Last Updated on STN: 8 Oct 1997
AB Intracellular production of active oxygen in the brown alga Fucus evanescens C. Ag. was studied by measuring the capacity for in vivo conversion of 2',7'-dichlorohydrofluorescein diacetate (DCFH-DA) to the fluorescent dye 2',7'-dichlorofluorescein (DCF), both in emersed and immersed seaweeds. Algae were incubated in seawater containing DCFH-DA under a range of conditions, and it was also possible to load algae with DCFH-DA and then follow subsequent DCF production in emersed tissue. DCF formation was linear for at least 2 h in both darkness and **light**, with the rate of formation increasing with the **light** level.

DCF formation was temperature dependent. It also increased when algae were treated with H-2O-2 or methyl viologen (paraquat), which disrupts photosystem 1 electron transport and increases O-2- production. Exogenous catalase reduced in vivo DCF production, presumably by lowering cellular concentrations of H-2O-2. Hydrogen peroxide was released into the seawater by illuminated algae resulting in external dye conversion to DCF. However, this does not interfere with in vivo measurement of DCF by loaded, washed algae because DCF leakage appeared to be negligible. Internal DCF did not affect photosynthetic oxygen production relative to untreated controls. Overall, our data suggest that DCFH-DA is a potentially very useful probe for studying active oxygen metabolism in seaweeds subjected to environmental stresses.

L85 ANSWER 59 OF 63 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1992:92255 BIOSIS
DN PREV199293048805; BA93:48805
TI DETECTION OF GRANULOCYTE REACTIVE OXYGEN SPECIES FORMATION IN WHOLE BLOOD USING FLOW CYTOMETRY.
AU HIMMELFARB J [Reprint author]; HAKIM R M; HOLBROOK D G; LEEBER D A; AULT K A
CS DIV NEPHROL, MAINE MED CENT, PORTLAND, MAINE 04102, USA
SO Cytometry, (1992) Vol. 13, No. 1, pp. 83-89.
CODEN: CYTODQ. ISSN: 0196-4763.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 12 Feb 1992
Last Updated on STN: 13 Feb 1992
AB We have developed a technique for analysis of granulocyte reactive oxygen species formation in whole blood using flow cytometry and two color immunofluorescence. This technique relies upon the use of specific fluorescent dye (LDS-751) to stain nucleated cells, eliminating erythrocytes from analysis. Using LDS-751, forward angle **light** scatter, and 90° side scatter, a granulocyte gate, monocyte gate, and lymphocyte gate were identified. Analysis with multiple FITC conjugated monoclonal antibodies demonstrated greater than 95% purity of a flow cytometrically identified granulocyte population in whole blood without physical manipulation of the blood. Utilizing 2'7' dichlorofluorescein diacetate (DCFH-DA), we were able to measure granulocyte intracellular reactive oxygen species production. Dose response curves were obtained for the effect of granulocyte agonists phorbol myristate acetate, FMLP, and heat fixed Staphylococcus aureus on reactive oxygen species production. The techniques described in this paper should be useful for measuring granulocyte activation in vivo with flow cytometry.

L85 ANSWER 60 OF 63 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1990:230391 BIOSIS
DN PREV199038108529; BR38:108529
TI NEUTROPHIL FLUORESCENCE AND **LIGHT** SCATTER AFTER THE PHAGOCYTOSIS OF DCFH-DA LOADED PATHOGENIC BACTERIA.
AU BASSOE C-F [Reprint author]; PIERSON C L; WARD P; HUDSON J; BRUNER L; ROBINSON J P
CS DEP PATHOL, UNIV MICHIGAN, ANN ARBOR, MICH, USA
SO Cytometry, (1990) No. SUPPL. 4, pp. 30.
Meeting Info.: XIVTH INTERNATIONAL MEETING OF THE SOCIETY FOR ANALYTICAL CYTOLOGY, ASHEVILLE, NORTH CAROLINA, USA, MARCH 18-23, 1990. CYTOMETRY.
CODEN: CYTODQ. ISSN: 0196-4763.
DT Conference; (Meeting)
FS BR

LA ENGLISH
ED Entered STN: 12 May 1990
Last Updated on STN: 12 May 1990

L85 ANSWER 61 OF 63 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1990:28179 BIOSIS
DN PREV199089015145; BA89:15145
TI EVALUATION OF HUMAN MONOCYTE OXIDATIVE METABOLISM UTILIZING A FLOW CYTOMETRIC ASSAY.
AU ZELLER J M [Reprint author]; ROTHBERG L; LANDAY A L
CS DEP IMMUNOL MICROBIOL, RUSH-PRESBYTERIAN-ST LUKE'S MED CENT, 1653 W CONGRESS PARKWAY, CHICAGO, ILL 60612, USA
SO Clinical and Experimental Immunology, (1989) Vol. 78, No. 1, pp. 91-96. CODEN: CEXIAL. ISSN: 0009-9104.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 19 Dec 1989
Last Updated on STN: 20 Dec 1989
AB Assays routinely employed to evaluate human monocyte respiratory burst activation have been limited to measuring responses of bulk cell preparations. We demonstrate that individual monocyte responses can be easily assessed by using 2,'7 dichlorofluorescin diacetate (DCFH-DA) and flow cytometry. Adherence purified monocytes were incubated with DCFH-DA, washed, and stimulated with either phorbol myristate acetate (PMA) or heat-aggregated IgG (HAIgG). Log green fluorescence signals were measured by using a flow cytometer equipped with a 5-W argon laser set at an excitation wavelength of 488 nm. Optimal conditions for stimulation included exposure to 5 μM concentrations of DCFH-DA for 15 min, followed by a 60-min incubation with either PMA or HAIgG. Dichlorofluorescin (DCGH) oxidation by monocytes increased in a graded fashion as a function of stimulus concentration. Monocytes responded as a uniform population in response to increasing doses of PMA and HAIgG. This oxidative response was also monitored in mixed populations of mononuclear leukocytes, with monocytes identified on the basis of **light** scatter properties and surface antigen staining with anti-CD14. More than 90% of cells demonstrating increases in log green fluorescence signals following activation were CD14 positive. Measurementof DCFH oxidation by monocytes is reflective of the capacity to undergo a respiratory burst response, in that monocytes obtained from patients with chronic granulomatous disease were only minimally reactive. This assay, representing a rapid means of assessing monocyte respiratory burst activation by single cell analysis, is suitable for use in both clinical and research settings.

L85 ANSWER 62 OF 63 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1987:229851 BIOSIS
DN PREV198783118021; BA83:118021
TI FLOW-CYTOMETRIC CHARACTERIZATION OF STIMULATION FREE RADICAL FORMATION PEROXIDASE ACTIVITY AND PHAGOCYTOSIS OF HUMAN GRANULOCYTES WITH 2 7 DICHLOROFLUORESCEIN DCF.
AU BUROW S [Reprint author]; VALET G
CS MILDRED-SCHEEL-LABOR KREBSZELLFORSCHUNG, MAX-PLANCK-INST BIOCHEMIE, AM KLOPFERSPITZ 18A, D-8033 PLANEGG-MARTINSRIED, W GER
SO European Journal of Cell Biology, (1987) Vol. 43, No. 1, pp. 128-133. CODEN: EJCBDN. ISSN: 0171-9335.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 22 May 1987

Last Updated on STN: 22 May 1987

AB A standardized four-step assay for the flow cytometric determination of the oxidative activity of human polymorphonuclear leukocytes (PMNL) from normal human individuals and from septic patients was developed, using 2,7-dichlorofluorescin-diacetate (DCFH-DA) as indicator for the intracellular formation of H2O2 and free radicals. Spontaneous H2O2 and free radical formation was measured by preincubation of buffy coat PMNLs from fresh peripheral venous blood at 37° C and pH 7.4 with 10 μM DCFH-DA. Intracellular peroxidase activity was determined by addition of 1 mM external H2O2 to this assay. A maximum of granulocyte oxidative burst activity was elicited by the addition of 150 nM phorbol-myristate-acetate (PMA). A physiological burst was generated by incubating buffy coat PMNLs together with E. coli bacteria. The DNA of dead cells was in all instances simultaneously counterstained with propidium iodide (PI). Quiescent of H2O2 or bacteria treated granulocytes moved as a single cell cluster to higher fluorescences. Stimulation with PMA, in contrast, generated always a bimodal distribution of granulocyte fluorescence with the high activity cell cluster being approximately sevenfold more active than the low activity cell cluster. Roughly half of the granulocytes in normal individuals had high fluorescence. An increase of the high activity granulocytes was observed in septic patients. Model experiments with the nonfluorescent DCFH-DA cleavage product DCFH (2,7-dichlorofluorescin) showed that DCFH was quickly photo-oxidized to fluorescent DCF (2,7-dichlorofluorescein) by UV-**light** and to a lower degree by daylight. DCFH even slowly autooxidized in the dark. As a consequence, DCFH-DA was dissolved and stored in organic solvents in the dark to prevent spontaneous hydrolysis and autooxidation. All cellular assays prior to the flow-cytometric measurements were stored and incubated strictly in the dark.

L85 ANSWER 63 OF 63 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1977:117078 BIOSIS
DN PREV197763011942; BA63:11942
TI PHOTO TOXIC REACTION TO XANTHENE DYES INDUCED BY VISIBLE **LIGHT**.
AU MORIKAWA F; FUKUDA M; NAGANUMA M; NAKAYAMA Y
SO Journal of Dermatology (Tokyo), (1976) Vol. 3, No. 2, pp. 59-67.
CODEN: JDMYAG. ISSN: 0385-2407.
DT Article
FS BA
LA Unavailable
AB Many dyes, e.g., methylene blue, rose bengal and eosin, are known as photosensitizers; in the presence of molecular oxygen they induce cell lethality and skin photosensitivity. Several dyes are used in cosmetic products, particularly in lipsticks. Human lip skin is therefore exposed to potential danger from dye-sensitized phototoxic reactions. Using an in vivo system of mammalian skin, such as the abdominal skin of rabbits, screening tests were established for the phototoxic potential of synthetic dyes in 2 ways: (a) intracutaneous injection; (b) topical application with and without damaging the barrier property of the stratum corneum. In the intracutaneous injection assay, distinct phototoxic reactions were induced by rose bengal, eosin Y.S. and dibromofluorescein. When these dyes were applied topically to intact skin, no phototoxic reactions were observed. Phototoxic reactions were, however, elicited when the dye solutions were applied to abraded, or scratched skin. The intensity of phototoxic reaction was influenced by the vehicle in which the dyes were suspended. Phototoxic reaction to the dyes was induced by artificial **light** and by sunlight. By using commercially available fluorescent lamps with different spectral emissions, the action spectra for the phototoxic reaction to these dyes were investigated. The maximum phototoxicities of the dyes were manifested by **light** within a spectral range of

400-600 nm. Further studies on action spectra, using a monochromatic irradiation system, revealed a high correlation between the action spectra of the dyes and their absorption spectra. Maximum effective wavelength for the phototoxic reaction of eosin Y.S. was 525 nm. This topical and intradermal assay for assesing phototoxic reaction to synthetic dyes in living skin will be a practical and useful measure for studying the phototoxicity of the dyes.

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